ADMINISTRATION REPORT

OF THE

PUBLIC HEALTH DEPARTMENT OF THE CITY OF PORT-OF-SPAIN

FOR THE YEAR

1956

BY

DR. RODERICK MARCANO, O.B.E. (Mil.), M.D. (Lond.), M.R.C.P. (Lond.), D.P.H. (Lond.),
MEDICAL OFFICER OF HEALTH

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Local Authority in the Urban Sanitary District of the City of Port-of-Spain

1955-1956

THE CITY COUNCIL

His Worship the Mayor, Councillor S. P. Mathura, J.P.

Deputy Mayor:
Councillor H. Scott

Aldermen:

L. R. Gomes
H. Hudson Phillips
B. I. Lalsingh
E. Lee Lum
Hon. Ranjit Kumar

Councillors:

J. Abraham
I. Durham
F. T. Farfan
J. Foster
R. Hamel-Smith
J. P. Hutchinson
J. Kelly
M. Lee Lung
Q. O'Connor
A. M. Querino
L. Rostant
J. Sarkar
C. B. Tywang

Administration Report of the Public Health Department of the City of Port-of-Spain, Year 1956

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Public Health Department,
35, Frederick Street,
Port-of-Spain,
Trinidad, B.W.I.
16*th October*, 1957

URBAN SANITARY DISTRICT OF THE CITY OF PORT-OF-SPAIN

Secretary, Local Authority,

Sir,

I have the honour to submit, for the information of the Local Authority, the Annual Report on the health and sanitary condition of the Urban Sanitary District of the City of Port-of-Spain for the year ended 31st December, 1956.

The year 1956 may be summarised briefly as a year in which nothing which had any definite adverse effect on the health and sanitary condition of the Urban Sanitary District of the City of Port-of-Spain occurred and in which, at the same time, nothing of a major nature directed specifically to the amelioration of the state of the public health was attempted.

In fact only routine activities were pursued and nothing more than maintenance of the existing public health services and the customary oiling of the public health machinery was attempted, or for that matter could be attempted, in the year under report due to that chronic malady from which the Local Sanitary Authority has been suffering for a long time now and which bids fair to strangle its very life blood, viz. lack of funds.

Whatever improvement has taken place, if indeed it is possible to claim that the conscientious performance of the day-to-day work of the various units that function under the aegis of the Public Health Department leads to improvement, has been aided materially by the activities of those other departments and agencies which have an indirect bearing on the state of the public health such as those of the Child Welfare League, the Social Assistance Department of Government, the Department of Education of Government as well as by the general all round improvement in the standard of living and personal health which has undoubtedly been taking place steadily, if slowly, in the Urban Sanitary District.

When early in the year 1949 the Financial Commission appointed by Government to "enquire into the financial relationship between Government and the Municipalities and to make recommendations" had arrived from England and after due investigation and careful scrutiny had reported early in 1950, and when the Legislature under the New Constitution of that year had met and accepted in the latter part of October the recommendations of the Commissioners, there was a profound feeling of relief that what had been argued and fought for had at long last been won, and that the financial troubles of the City of Port-of-Spain had come to an end. Little did we think that four years afterwards the Corporation would have found itself in such a desperate plight that no major works of any kind could possibly be undertaken and that the position would have deteriorated so rapidly that Sir John Imrie, one of the Commissioners, would have had to be sent for again, to report once more on the financial condition of the Municipalities and to make further recommendations.

Sir John Imrie arrived here early this year 1957 and made a thorough and comprehensive survey of the financial position of the Municipalities and his report is now in the hands of Government and is receiving their consideration.

In the meantime the *status quo* of just carrying on, holding on tightly and hoping like Micawber for something to turn up continues, and as I write the feeling of frustration and of despair and despondency continues to remain the predominant emotion.

None of the major works so necessary for the abatement of the many and different nuisances to which I have been making reference for so many years now were undertaken during the year under report—and none of course could be undertaken—and the extremely urgent problems of an adequate water supply for the City, the sewering of the East Dry River, Belmont, St. James and Cocorite Sub-districts, the relaying out, widening, paving and making up of roads, lanes, and tracks of the East Dry River and Belmont Sub-districts, the widening and paving of existing, and the construction of additional drainage channels in these sub-districts and the equally neglected sub-Districts of St. James and Cocorite, the getting rid of the numerous ramshackle shacks and shanties as well as the dilapidated barracks and dwelling houses that deface the landscape in these areas, still remain untouched, far less solved.

Nothing in the nature of extraordinary works was done to stem the tide of steady deterioration that has been taking place in the various institutions that are owned by the Corporation and operated by the City Council with the inevitable result that the Eastern Market, the Woodbrook Market.

the Fish Market, the Port-of-Spain Abattoir all present the depressing and insanitary aspect of buildings that have accumulated layers of grime, dust, and dirt and all display the unmistakable signs of the ravages of time which only extensive works of a major nature can now repair.

Nothing was done in the year under report to repair the damage done to the footways and streets of the central areas of the City by continuous wear and tear except in isolated cases to fill a bad rut in the road or a dangerous hole in the pavement; none of the earthen drains or grass verges of certain streets in the uptown and adjoining suburban areas were paved, and not a single brick of the new Town Hall has been laid.

In so far as vital statistics are concerned the actual figures for the year 1956 show a slight overall deterioration of the position which was attained in the year before and which was recorded fully in the annual report for the year 1955.

This may not be of any particular significance, and no undue importance can be and ought to be attached to the figures for one year only, but the facts are that in the year under report the birth rate, the death rate and the infant mortality rate all show a somewhat adverse trend. The birth rate declined to 2,184; and the death rate increased to 933 per 100,000 population, and the infant mortality to 60.28 per 1,000 live births as compared with 2,631 and 903 per 100,000 population and 44.83 per 1,000 live births in the year 1955.

The mean population, i.e. the population on the 30th June, 1956, was estimated to be 120,000, the natural increase of population 1,501 souls, and the maternal mortality rate 4.19 per 1,000 live births, as compared with 117,000, 2,011 and 5.20 for the previous year.

No decline of any statistical significance was noted on analysis of the death rates for individual diseases or groups of diseases except perhaps in the case of the death rate attributable to bronchitis which worked out to be 10 per 100,000 population as compared with 21 per 100,000 population in the year 1955.

The figures for all the other well known diseases or groups of diseases remained practically the same as those for the year 1955, and in the case of deaths from syphilis, from diarrhoea and enteritis, and from diseases of the heart and blood vessels there was an increase in the rate per 100,000 population from 10 to 15, 38 to 47, and from 221 to 239.

I hope I shall be excused for repeating that these facts and figures portend no improvement in the state of the public health of the Urban Sanitary District, and perhaps even a deterioration, unless the major works to which I have made reference above, and for which I have been clamouring for the past twenty years are undertaken, and there is universal agreement that this state of affairs has been allowed to persist for too long a time. The steady growth of the population makes this an imperative necessity and unless the Local Authority adopts a determined and resolute attitude towards this unsatisfactory situation and takes prompt and firm action to deal with it, infectious disease may assume epidemic proportions and the population decimated by a catastrophe over which we may be able to exercise very little control.

There is one aspect at least to this mournful story that I have been repeating over the years that is "flattering unction" to my soul and that is, that I have no doubt whatsoever that the Local Authority is fully aware of what are their obligations to the backward areas and I am convinced that it is only the question of funds that has stood between them and the achievement of these so very desirable and essential improvements.

I must again record my grateful thanks to His Worship the Mayor, who is also Chairman of the Local Sanitary Authority, and to the Aldermen and Councillors for the active interest they have shown in all matters that have a bearing on the state of the public health, and for their encouragement, and co-operation and for the ready support of all plans and projects directed to the improvement of the health and sanitary state of the Urban Sanitary District.

To that extent it can be said with truth that the work of the Department has been pleasurable and satisfying.

Thanks also are due to my colleagues in the other Departments of the Corporation, the City Engineer, the Waterworks and Sewerage Engineer, the Town Clerk, who is also Secretary of the Local Sanitary Authority, and the City Treasurer, whose active support and ready help were always forthcoming and which contributed in large measures to whatever measure of success attended the working of the Public Health Department during the year under report.

I have the honour to be,
Sir,
Your obedient servant,

RODERICK MARCANO
Medical Officer of Health

NATURAL AND SOCIAL CONDITIONS OF THE DISTRICT

No advance of any importance can be recorded under this heading and the natural and social conditions of the Urban Sanitary District remain substantially the same as have been detailed in the last annual report.

The size of the City remains at 2,550 acres such as it has been since the year 1948 when a long controversy which has been going on with the Central Government over the southern boundary of the City was decided in favour of the Council by the Colonial Office, and the southern boundary of the City was redefined by Ordinance "as the sea wherever it is and wherever it is likely to be in the future".

The inclusion at that time of the 168 acres of the recently reclaimed King's Wharf and Dock Site and of the area south of Wrightson Road brought the acreage of the City up to 2,550 acres, where it has remained ever since.

A serious attempt, however, was made in the year under report to include certain sections of Cascade, Coblentz Gardens, St. Ann's, Ellerslie Park and part of Ross Lands in the St. James area, but that attempt did not materialise due in large measure to the objections raised by the residents in the areas concerned who protested by way of petition at the increase of rates that was likely to occur as a direct result of inclusion within the limits of the City.

Though the City Council passed the resolution required by section 6(2) of the Port-of-Spain Corporation Ordinance, Ch. 39. No. 1 when any extension of the limits of the City is contemplated and had it forwarded to the Governor-in-Council for confirmation, apparently no further action was taken and that is where the matter now stands.

However an extension of the northern and western limits of the City appears logical and it cannot be long now before the areas contiguous to the northern and western boundaries are included to enjoy such amenities as the residents of the City of Port-of-Spain now enjoy.

The estimated mid-year population of the City showed an increase of 3,000 souls in spite of a falling birth rate, due very likely to the accompanying decline in the death rate, the influx into the City of residents from the rural areas and to an excess of immigration over emigration. I need hardly refer of course, to the fact that the City's day population is much higher than the estimated resident population, seeing that so many of the inhabitants of the areas contiguous to the boundaries of the City earn their livelihood in the City and as many as 20,000 more people make use of the services the City provides and enjoy its amenities.

Except for some little work in the Santa Barbara Ravine in the East Dry River Sub-district, that Cinderella of all sub-districts remained in *status quo,* and the unhealthy state of that sub-district which has been accepted so complacently by the rest of the City through a most culpable lack of appreciation of the potential threat of this sub-district to other more favoured sub-districts, remained untouched, as badly drained, as inadequately supplied with water, as liberally adorned with dilapidated ramshackle buildings, with cesspits cheek by jowl with dwellings and as highly insanitary as it ever was.

John John still survives and Shanty Town continues to flourish in spite of the progress of the Swamp Road citywards, with no proper water supply and a limited number of privy cesspits for the disposal of faecal matter.

The bright hope and confident expectation that the year 1956 would have seen the beginning of a great transformation of the face of this sub-district have not materialised. The Public Health Department, however, continues to live in hope though it may be doomed to die in despair.

SANITARY CIRCUMSTANCES

(Water)

The shortage of water to residents in the Waterworks District continues and seeing that the population increases with each ensuing year and the volume of water remains substantially the same and is even diminishing in proportion as the catchment areas of the various river sources become more and more urbanised, the situation is undergoing a progressive deterioration.

The water remains potable and daily samples of water taken at the various sources of supply and at various points in the distribution system continue to show a very high degree of purity and fitness for human consumption. This is achieved only by chlorination of the raw water at each individual source and in the case of the river sources of supply chlorine as high as 1 or 2 or even 3 parts per million, as at the Maraval Reservoir, has to be added to ensure a safe product and to enable a residual chlorine to be obtained sufficent to deal with any possible contamination that may take place in the Distribution System on the way to the taps of the consumer.

But there is no doubt in the minds of those of us who have to deal with the water supply of the City that a safe and eminently potable product ultimately reaches the consumer, and the question of the possibility of bowel-filth disease through consumption of water in the City of Port-of-Spain

does not arise nor can it be said with truth that the water is normally of a chlorinous taste; except in the areas that happened to be close to the actual sources of water supply, it is the exception to find residual chlorine of any appreciable degree, as is shown by the orthotolidine test, and in the City Proper and the various sub-districts it is the rule to find no residual chlorine whatsoever on chlorical examination. These chemical tests are taking place every working day throughout the year and by their results a close check is kept on the amount of chlorine used at the various sources of supply.

In the existing circumstances it would appear that very little more can be done to insure safety, but we are not unmindful of the fact that our river sources continue to grow unsatisfactory with each succeeding day and it is imperative that they be eliminated at the earliest possible opportunity.

For one thing development in the various river valleys, the Maraval River Catchment Area, the St. Ann's Catchment Area, the Cascade Catchment Area cannot be indefinitely delayed and the existing shortage of housing accommodation and the scarcity of suitable building lots in and near the City make it mandatory that the readily available and easily accessible building lots in these areas be used for the construction of dwelling houses for the hard pressed citizens of the Urban Sanitary District. How soon these sources will be replaced is again a matter that is in the lap of the Gods but it is clear that the tension associated with this recurring problem that reaches its peak during the dry season and creates anxiety and alarm whenever a dry spell sets in cannot continue for much longer without some catastrophe setting in; and one can only repeat that this problem cannot be left to solve itself but that a determined attempt must be made to get rid of unsatisfactory sources of supply and replace them by sources where the initial standard of purity of the raw water is much higher and which will necessitate, therefore, much less sterilising chemical or perhaps none at all to secure a safe and potable product.

The Distribution System, I need hardly state, needs extensive overhauling and great expansion to meet the needs of the increasing population seeing that the exsting system is an old one and laid down many years ago when the size and the population of the City was about half what it is today.

Bacteriological Examination of Water Supply 1956

Where Derived	No. of samples taken	Results of Examination			
		Safe	Unsatisfactory (presumptive B. Coli present)	Not safe without further treatment (non-faecal B. Coli present)	Not safe without further treatment (faecal type B. Coli present)
*Cocorite (Wells)	82	77	5	—	—
Docksite Well (untreated)	33	24	9	—	—
†St. Clair Pumping Station	46	46	—	—	—
‡St. Clair Well (untreated)	—	—	—	—	—
‡St. Clair Well (treated)	47	47	—	—	—
Wharf Well No. 3 (untreated) ...	32	32	—	—	—
†Maraval Reservoir	43	41	2	—	—
§Cascade Reservoir	78	74	4	—	—
§St. Ann's Reservoir	155	138	16	1	—
Knaggs Hill	43	43	—	—	—
Queen's Park Savannah Wells (untreated)	129	126	2	—	1
Laventille Reservoir	33	33	—	—	—
‖Picton Reservoir	42	42	—	—	—
‖Port-of-Spain General Hospital (Tap) ...	37	37	—	—	—
‖143, Charlotte Street (Tap)	37	37	—	—	—
‖133, Henry Street (Tap)	39	39	—	—	—
†Saddle Road, La Seiva (Tap)	41	41	—	—	—
Masson Hospital (Tap)	34	34	—	—	—
Microbiological Institute (Tap) ...	45	45	—	—	—
Sanitary Laundry (Tap)	39	38	1	—	—
Furness Withy & Co. (Taps)	119	101	18	—	—
Trinidad and Tobago Electricity Commission (Tap)	24	23	1	—	—
St. James (Taps)	26	25	1	—	—
Woodbrook (Taps)	25	24	1	—	—
City Proper (Taps)	53	51	2	—	—
East Dry River (Taps)	30	29	1	—	—
Belmont (Taps)	20	19	1	—	—
St. Clair (Taps)	30	30	—	—	—
Wells on Private Property					
Electric Ice Co., 3A, Ariapita Avenue ...	46	46	—	—	—
Canning & Co., 60-68, Richmond Street	90	89	1	—	—
	1,498	1,431	65	1	1

Standard of Purity : B. Coli absent in 100 c.c.
*Chlorinated, not filtered.
†Filtered after chlorination.
†Chlorinated before distribution.
§Filtered before chlorination.
‖Filtered before chloramination.

Chemical Examination of Water

Samples examined by Government Chemist—1956

Where Derived	No. of samples examined	No. of samples found safe
Picton Reservoir	32	32
Maraval Reservoir	12	12
Cascade Reservoir	11	11
St. Ann's Reservoir	13	13
Cocorite Pumping Station	11	11
Cocorite Pumping Station (for salinity)	243	243
Docksite Wells	10	10
Queen's Park Savannah Wells	28	28
St. Clair Well	11	11
Wharf Well No. 3	12	12
	383	383

DRAINAGE AND SEWERAGE

It cannot be denied that by and large the City of Port-of-Spain is a well drained City, meaning this viz: that no large area of stagnant water exists within the limits of the Urban Sanitary District and taking into account the fact that there is a gradual slope to the sea from north to south and from east to west it is not difficult to understand how storm and sullage waters find a comparatively easy outlet to the sea. And so it is not surprising to find that a heavy downpour of tropical rain which causes yards and house drains to overflow, slipper drains of streets to collect inches of water, gullies to be flooded and so permit storm waters to find their way into the sewers, soon dries itself out and streets and drains soon empty themselves of their contents and become dry again after a comparatively short time.

So far so good.

But there are, especially in the East Dry River and in the St. James and Cocorite Sub-districts, fairly large earthen drains which can and often do contain large sheets of stagnant water and which are flushed out into the main drainage channels of the City, viz : the paved beds of the St. Ann's and Maraval Rivers only by heavy downpours of rain.

These ravines present all the insanitary features that are usually associated with stagnant drains and constitute suitable potential breeding places for mosquitoes and flies in addition to serving as uncontrolled dumping grounds for refuse and filth of all sorts.

Time and again it has been pointed out that these ravines constitute a serious menace to the health of the area concerned to stem which, levelling, grading and paving are necessary, and it is gratifying to be able to record that this crying need has been conceded and the Santa Barbara Ravine in the Belle Eau Road Area and the Harding Place Ravine in the Cocorite Area are at long last receiving the attention that they deserve.

As a matter of fact the paving of the Harding Place Ravine in the Cocorite Area was completed in the year under report and though the Santa Barbara Ravine project in the Belle Eau Road Area had to be stopped for want of funds it cannot be long now before the whole earthen bed and the sides of this drain are paved right down to its outlet into the main drain of the City which discharges into the Dry River.

When this has been accomplished apart altogether from the beneficent effect on the general health and sanitary condition of the area in question, the not inconsiderable amount of time and money spent in oiling, draining, canalising and clearing these channels will have been saved.

Little useful purpose will be served by elaborating further the time-worn theme of a sewerage system for the East Dry River and Belmont and the St. James and Cocorite Sub-districts to link up with the existing sewerage system of the City. I cannot convince myself that twenty years have passed since first I drew the attention of the Local Authority to this most necessary of all basic requirements to improve the health and sanitary condition of the City and that it still remains just a project on paper. The toll of suffering and misery of disability, sickness and even death that has thereby been exacted from the unfortunate residents of these sub districts has been and continues to be considerable.

The bright faces happily continue and the carefree spirit and determined will of the residents of these areas who are among the poorest, worst nourished, and most unfortunate of the Urban Sanitary District continue to manifest themselves but they do not deceive the knowing eye and trained mind which discern quite easily the clear signs of oncoming disease and its certain progression to eventual dissolution.

When will this heavy burden be lifted off the face of these districts? What great evil has been perpetrated by the people who are doomed to live in these sub-districts that they should be thus condemned? Your answer is as good as mine.

SCAVENGING AND REFUSE DISPOSAL

The scavenging of the City of Port-of-Spain and the disposal of its refuse cannot be stated to be unsatisfactory and the service rendered to the citizens under this particular heading is considerable and of great value in the preservation of health and in the elimination of insanitary conditions. One has only to contemplate for a moment what would happen if these services were to break down, and actually to survey the state of insanitation, chaos and panic when it does occasionally break down in limited areas to realise how essential this service is and what meticulous care should be taken to see to it that every aspect of its many sided face be given the attention it deserves. There are, I need hardly state, many gaps and they are well known to those who operate the service and every effort is being made to fill these gaps that can with the limited resources of manpower and money at our disposal, be filled.

Scavenging and refuse disposal, as I have stated on more than one occasion, is a co-operative effort in which the scavenger, the refuse hauler and householder are in joint partnership, and these three partners must work together in a combined operation to achieve the best results. Each has a clear and well defined function to perform and consideration and co-operation are the key to the successful execution of the service. That is the reason for the constant indoctrination of the municipal worker and for the continuous health education of the householder; the former is done by the staff of the City Engineer's Department and particularly by the staff of its Transport Train, the latter by the outdoor staff of the Public Health Department.

Just as the householder has to be constantly reminded, and sometimes forced, to provide a proper receptacle for refuse collection and to put it out at suitable locations at the prescribed time and not to litter the yards, pavements and streets of the City by the indiscriminate dumping of refuse; so the scavenger has to be trained, directed and even disciplined, to get his job thoroughly and courteously done, and not to antagonize the householder by unseemly conduct or by the wilful destruction of property to procure which he may have had to undergo great expense.

It can be stated with truth and it is very satisfying to be in a position to say so, that there is with each succeeding year a greater consciousness on the part of the workmen of the Corporation of the importance of the work they are called upon to perform, and with greater understanding and further training they are learning to appreciate clearly the relation between themselves and the householders, and vice versa the householder as a result of more effective health education is showing greater and greater consideration and exhibiting greater co-operation with the scavenger whose job, he is appreciating more and more, is difficult and trying.

The experiment of scavenging the down-town areas of the City between the hours of six and twelve in the evening and the rest of the City after eight o'c'ock in the mornings thus obviating in the one case the scavenging of the busy business sections of the City in the early morning when traffic and business are getting to their peak, and in the other case the putting out of dustbins on the pavements and slipper drains at nights, is beginning to work quite well and smoothly and it would appear that the experiment has come to stay and is likely soon to be enacted into law.

There is still room, of course, for greater co-operation and goodwill on the part of merchants and business people seeing that refuse is still, in spite of continuous and persistent efforts, being dumped in the late afternoons and at nights in the streets and the drains and on the pavements, and also for greater understanding and greater goodwill on the part of the householder in the sub-districts of the City where there can still be found the owner or occupier who persists in putting out his dustbin at night to be overturned by dogs or rummaged by cats and so litter the surroundings, or who deposits refuse in the street or slipper drain at night before retiring, but great progress has been made and is still being made in getting the new directions as to the time for the collection of refuse containers and the location where they should be deposited complied with.

When funds become available to get additional and more up to date scavenging trucks purchased and particularly to enable short-wheel based scavenging trucks to operate in the uphill districts of the eastern portion of the City, more gaps in the service will be filled to the greater benefit and better health of the inhabitants of the whole of the Urban Sanitary District.

THE EASTERN DUMP

The Eastern Dump situated at the eastern entrance to the City to the South and East of the Abattoir, represents the area where the final stage of refuse disposal is executed.

For it is here where all the refuse collected by the scavenging carts and trucks of the Transport Train of the Council and where also refuse collected by private firms within the City, or even sometimes outside the City, and transported by private trucks or carts is finally disposed of by the method and process of "controlled tipping". This area although leased exclusively to the City by Government is not used solely by the Local Authority of the City of Port-of-Spain for the disposal of refuse collected and transported to this site by them.

The Local Authority of St. George West also makes use of this Dump to dispose of refuse collected in those areas of that Local Authority which are contiguous to the City, and a contribution to cover the cost of levelling, compressing and covering with earth is made by the Local Authority of St. George West to the Port-of-Spain City Council.

This site has a most important bearing on the state of the public health of the City and reference has been made in nearly every annual report to this fact and to the imperative necessity that "controlled tipping" in the exact technical sense of that phrase be undertaken here. Any hastily improvised or half hearted attempt to dispose of refuse by any means short of "controlled tipping" must inevitable lead to disaster, several bitter experiences of which we have had in the past.

Who is there that is so old or so disinterested as not to remember the plague of flies that invaded the eastern districts of the City and made life so unbearable and so fraught with danger a few years ago when the bulldozer on the Dump was temporarily loaned to Grenada to help repair the damage wrought by hurricane "Janet"?

Can we forget the menace of mosquito nuisance on the Dump that caused so much concern and anxiety during the yellow fever epidemic of 1954 and to abate which urgent measures of spraying with strong solution of insecticides had to be hurriedly undertaken at the cost of several thousands of dollars?

Ideal conditions for the breeding of rats and other vermin exist on any dump, and measures directed to the elimination of possible breeding grounds and to the destruction of rats and mice to keep down the rat population to the barest minimum and even to eliminate these vermin altogether must at all times be taken.

It is unfortunate that situated as it is in pretty close proximity to parlours and warehouses and even to dwelling houses—the part of Shanty Town that lies within the City is situated at its south-western corner—there is the ever present possibility that any nuisance arising here may soon find itself into the City, and likewise any disease process created by the insanitary conditions on the Dump can easily affect the residents nearby and so spread to other residents of the City even in its most remote areas.

I am pleased to be able to record that there is a growing awareness of all these possibilities and the City Engineer's Department, through the valiant and laudable efforts of the Manager of its Transport Train have with the help of the bulldozer so generously donated to us by Government, succeeded in levelling off the Dump to a large extent and it is now assuming the shape and appearance that an orderly and well kept dump should assume.

Nuisances are now at a minimum though I am again to stress that "controlled tipping" in the full sense of the term must be practised : every single load of refuse being deposited at the advancing rectangular face of the dump, compressed and levelled off with the bulldozer and at the end of the day covered over in its entirety with at least a six inch layer of earth. To achieve this it is clear that firm, solid, and hard surfaced roads must be constructed to the advancing edge of the Dump to enable trucks and carts to deposit their contents at the exact spot where it should be deposited without the possibility of their being bogged down by mud or stuck in slush during rainy weather.

SANITARY INSPECTION OF THE DISTRICT

Premises and Occupations controlled by Bye-laws and Regulations (Food)

A determined effort is being made to make sure that the inhabitants of the City of Port-of-Spain are provided with clean, safe, good, and wholesome food in the realisation that there is here much leeway yet to be made up and to this end the Department has speeded up its work directed to the health education of the public by the institution of a clean food campaign, and the work of registration of all food places and of all itinerant vendors has been intensified.

Though it is possible to secure a good measure of improvement, and a good deal of improvement has actually been achieved, in so far as cleanliness and sanitary conditions are concerned by the enforcement of the existing bye-laws and regulations, still there is urgent need for more definite and precise legislation affecting the standard and quality of food. This is a requirement that is fully recognised and as I write efforts are being made to get the Food and Drugs Ordinance revised and brought up to date by an expert from the World Health Organisation who is due to spend three months in Trinidad at the end of the year revising and modernising all the health laws of the Colony.

The greatest handicap that we have to contend with in our work to secure clean food is that too often the preparation and selling of food is looked upon as a last resort job for men and women who have not succeeded in any other kind of employment and who have neither the desire nor the inclination, far less the training or education necessary to secure a clean, safe and wholesome product. Another difficulty stems from the fact that by far the great majority of food handlers and the owners of shops, parlours, restaurants and cookshops, of food places generally are people of modest means who find great difficulty in providing themselves with the appliances that are necessary to protect foodstuffs during their preparation and exposure for sale from contamination with dirt, dust, filth, flies and vermin.

Proper equipment for this purpose is not cheap and has to be made by skilled workmen; in fact the best type is imported and by reason of this fact is expensive.

There is here urgent need for manufacturing firms to produce cheap equipment of this kind within the reach of the pockets of the type of person who usually undertakes the preparation and sale of foodstuffs to the general public.

The work of the Department would receive considerable help and would be productive of much more rapid and lasting results if it were possible to refer vendors of foodstuffs to firms where covered trays, display cabinets, glass covered stalls, standard wheeled vehicles, uniforms and caps could be purchased at a reasonable price on the hire-purchase system.

In the existing circumstances the Food Inspectors of the Department have to be satisfied with equipment that is very often improvised and sometimes below standard requirements and occasionally is in the nature of a makeshift designed to secure registration but as soon as the certificate of registration is obtained, it is discarded and put aside as being cumbersome and unsuitable.

The figures show that during the year under report there were within the limits of the City of Port-of-Spain 935 premises where food was prepared and/or exposed for sale to the general public made up of 301 retail shops and groceries, 329 parlours, cafes, and snackettes, 90 restaurants, cookshops and teashops, 43 bakeries (including confectionery factories), 59 ground provision depôts and fruit shops, 22 hotels, boarding houses and guest houses, 17 other factories (aerated water, coffee, popcorn, cornmeal, ice cream and palet), 40 wine and beer gardens and recreation clubs, and 34 cowsheds and dairies.

Of these only 729 applied for registration and only 298 were deemed of sufficiently good sanitary condition to warrant registration. 208 of these food places did not apply for registration and of the whole lot of 953 only 353 could be recommended.

From these figures it is clear that there is much more to be done and that the core of the problem remains yet to be touched.

In so far as itinerant vendors are concerned 515 applications for registration were received of which 404 were recommended but only 341 registered, 71 of these applicants could not be found. It must be borne in mind that quite a number of these itinerant vendors are seasonal, selling their fruits and green vegetables at those times of the year when the particular fruit or green vegetable is in season, and disappearing for the remainder of the year.

Sale of Foodstuffs Bye-laws

Requisition of Shops, Etc. (1956)

Provision, meat, and spirit shops, restaurants, hotels, refreshment parlours ...	291
Ground provision and fruit shops	14
Bakehouses	4
Confectionery shops	2
Aerated water factories	2
Other factories	13
Total 1956	326
Total 1955	351

Registration of Vendors (1956)

Bread and Cakes	45
Confectionery	28
Cooked food including fries, souse, &c.	107
Ice cream and palets	28
Sweet drinks	23
Vegetables, greens, fruits	127
Miscellaneous	44
Total 1956	402
Total 1955	330

Number of badges issued to itinerant vendors	341	(330–1955)
Number of oyster vendors licensed under Sale of Oyster Bye-laws	Nil	(Nil–1955)

Sale of Milk Bye-laws

Dairies and Milk Shops (1956)

Sub-Districts	*Cowshed Licences Issued*
City proper	—
East Dry River (unsewered)	—
Belmont (unsewered)	—
Woodbrook (sewered, but premises not all connected with the sewerage system)	1
St. James (unsewered)	2
Total 1956	3
Total 1955	7

Dairymen's Licences (1956)

Dairymen's licences issued to cowkeepers and other purveyors of milk ...	3
Dairymen's licences issued to shops, milk bars and refreshment parlours ...	35
Total 1956	38
Total 1955	47

Milk Vendors' Licences and Badges (1956)

	Milk Vendors' Licences	*Cows Tuberculin Tested*	*Badges*
Port-of-Spain	39	170	7
Out-districts	63	172	66
Total 1956	102	342	73
Total 1955	90	345	62

FOODSTUFFS SEIZED OR SURRENDERED AND DESTROYED, 1956

Under Part X of the Public Health Ordinance, Ch. 12. No. 4.

Bacon	...pounds	...	85	Meat ...	...pounds	...	3,086
Baking powder ...	...pounds	...	680		barrels	...	4
Beet	...crate ...	...	1		cans ...	...	337
Butter	...pounds	...	120		cases ...	...	89
				Milk ...	...pounds	...	2,003
Carrots	...pounds	...	27		cans ...	...	166
Cereals	...pounds	...	300	Mix, Cake ...	...pounds	...	30
Cheese	...pounds	...	196	Onions ...	...pounds	...	36
Cocoa	...pounds	...	56		bags ...	...	19
	cans ...	...	46	Peanuts ...	...pounds	...	6
Condiments ...	...pounds	...	28	Peas... ...	...pounds	...	12,695
Confectionery ...	...pounds	...	226		bags ...	...	16
Cornmeal ...	...pounds	...	50		cans ...	...	155
Fish	...pounds	...	597	Potatoes ...	...pounds	...	92,429
	bales ...	...	2		bags ...	...	372
	boxes ...	...	17	Preserves ...	...pounds	...	43
	cases ...	...	11	Salt	...pounds	...	3,411
	jars ...	...	84		bags ...	...	30
Fruit	...pounds	...	39	Sausages ...	...pounds	...	546
	crate ...	...	1		cans ...	...	230
Fruit, crystallized...	...pounds	...	20		cases ...	...	41
Fruit juices ...	...pounds	...	72	Spaghetti ...	...pounds	...	20
	cans ...	...	1,662	Sugar ...	...pounds	...	56
Garlic	...pounds	...	50	Tomato ketchup	...bottles	...	1,896
	crates ...	...	85	Tomato paste...	...pounds	...	31
Ham	...pounds	...	7,084	Tomato puree	...pounds	...	36
	cans ...	...	60	Tomato sauce	...pounds	...	641
	cases ...	...	635		cans ...	...	57
Macaroni ...	...pounds	...	106	Wafers ...	...carton	...	1

ANTI-RAT MEASURES

There is no new development under this heading to report except perhaps in one aspect, viz. that the Sanitary Inspector in charge of the Anti-Rat Unit was sent by Government to the United Kingdom on study leave in August 1956 to pursue a course of training in anti-rodent work, sponsored by the Colonial Development and Welfare Organisation.

When he had completed this course of training he was advised to stay on for another 3 months to do a course dealing with pest control as applied to foodstuffs.

Altogether S.I.F. Seon was away for seven months, he was able to attend lectures and engage in practical work dealing with the latest and most effective methods as applied to rat and mice nuisance, and he brought back with him a good deal of experience of the varous anti-rat poisons in common use and the most useful and effective baits.

All in all except for refinements in technique and more specialised knowledge, there is not a lot that was new in the way rat poisons and in the methods of detection of rat nuisance that he was able to bring back to us.

As has been stated in these annual reports before, we have for all practical purposes discarded the use of traps for catching rats and very few rat traps are now being stored by the Department. There is still use, however, for mice traps and these are kept in the Department, but mainly for the purpose of lending to householders who are persistently worried with mice and who apply to the Department for help in getting rid of this nuisance.

The "poisons" that we rely upon most, in order of importance, are warfarin or tomorin, arsenious oxide, and zinc phosphide, the latter when there is need for quick knock-down results in an operation that involves a large area, e.g., the dwellings in one or two adjoining streets or even in a block of buildings along with the underground drains and sewers.

We are more and more resorting to the use of warfarin in the case of individual warehouses, groceries, restaurants, shops and in dwellings in the various sub-districts of the City and the method of treatment with this poison has proved to be very effective indeed.

Rats do not seem to be able to detect the deadly effect of this chemical and they do not grow shy at eating it in spite of the fact that it kills so many of their numbers which die in places where they can be easily seen by, and to which there is ready access to, others of their kind.

In so far as species is concerned *rattus decumanus vel norwegicus* predominates, as they have always done, only about one-third of the number destroyed belonging to the species *rattus rattus*. Females outnumber males in the ratio of roughly two to one.

In regard to mice every year sees an increase in the number of these vermin caught.

The work of detection and elimination of rat nuisance is becoming with every passing year a highly skilled job and the men who do this work have to undergo a preliminary course of training before they are sent to work in the field and have to be under constant supervision and constant instruction in the best and latest methods.

It follows that only young men with a good elementary education and in whom a sense of responsibility can be developed are able to give satisfaction in this type of work; and equally when the right type of operative has been secured he expects and is entitled to, better consideration and a higher rate of remuneration than that of a labourer with pick or shovel.

Destruction of Rats and Mice, 1956

Rats caught by trappers	30,849
Rats bought	—
Total	30,849
Mice caught and destroyed	14,463

Examination of Rats by Government Bacteriologists

Rats examined for plague	30,849
Rats found infected with plague	—
Immature rats not examined	—

Species	*Decumanus*	*Rattus*	*Total*
Males	8,295	2,757	11,052
Females	15,383	4,414	19,797
Total	23,678	7,171	30,849

Anti-Mosquito Measures

The work of elimination of mosquito nuisance continues and the Anti-Mosquito Unit is well on the way to reduce the *aedes* index to zero which figure must be attained and maintained for the period of one year before the label "yellow fever receptive area" can be removed from the City and Colony.

During the year under report the *aedes* index remained at .6, the figure that was recorded in 1955, but it is the experience of all countries which have undertaken this work that it is a matter of great difficulty to reduce the index from 1 to 0 and here is where the efficiency of the organisation and the skill of its operatives are subjected to the acid test.

I am able to record that the progress that is being made in this particular direction is not unsatisfactory. In fact some very interesting features are beginning to manifest themselves. In proportion as the resistence to internal inspection grows so does the importance of hidden foci within the buildings increase.

In fact foci in vases, antiformicas, old bottles, in water contained in receptacles of various kinds are furnishing the main source of mosquito nuisance that gives rise to persistent complaints at the Department, and though householders often express great surprise when this fact is demonstrated to them, they are beginning to appreciate the fact that it is only rigid adherence to the technique laid down and only by a careful examination of all potential breeding places that these obscure foci can be detected and eliminated. Eaves gutters also quite often supply the answer to the breeding places of adults that fly about the house and are a cause of nuisance to the householder and the ladder squads of the anti-mosquito unit are kept quite busy in inspecting and examining eaves gutters, emptying them of stagnant water, clearing them of bush and other causes of obstruction, punching holes in them, and often even regrading them.

This question of eaves gutters is a source of worry to the Public Health Department and in spite of the fact that they are generally frowned upon by the City Engineer's Department, special permission having to be obtained for their erection, it is the rule rather than the exception for the builder to take the law in his own hands and to attach them to the roof without any permission whatsoever. As in all such matters, when once they have been put up, it is an extremely difficult job to get them taken down.

As a matter of fact eaves gutters are hardly ever necessary and in nine cases out of ten where resort is had to their use an alternative and sometimes even a cheaper solution can usually be found.

Getting rid of the other species of mosquito—culex, is also not such an easy matter, particularly in the first half of the year when water is at a premium. In the dry season the underground drains tend to remain unflushed for days and even weeks, and blocked as they are by accumulations of all sorts, water that gets into them remains stagnant furnishing ideal breeding grounds for culex fatigans.

Blocked underground drains, watery cesspits, in fact dirty stagnant pools of water anywhere furnish the usual sources of breeding for this species of mosquito.

Larval Index

		Premises with mosquito larvae per cent. of number visited
Yearly average	1938–1942	2.1
Year	1943	3.3
	1944	5.4
	1945	6.9
	1946	7.3
	1947	5.8
	1948	4.4
	1949	4.4
	1950	4.6
	1951	4.5
	1952	3.8
	1953	4.8
	1954	1.5
	1955	0.6
	1956	0.6

Inspection of Eaves Gutters, Etc., 1956

Number of inspections of premises	156,342
Number of inspections of eaves gutters	36,261
Number of occasions found in good order	34,835
Number of occasions found defective	1,426
Number of occasions found containing water only	1,203
Number of occasions found containing water and larvae	223
*Number of occasions mosquito larvae were found in tubs, antiformicas, tin cans, &c.	966
Yards cleared of receptacles	14,139

N.B.—*Occasions on which mosquito larvae were found by sanitary inspectors, during the course of 91,162 inspections of premises, are included in above figure.

Premises used for human habitation, Houses let in Lodgings, Common Lodging Houses

The acute shortage of housing accommodation for members of the working class, and for that equally important but much neglected and much misunderstood section of the community, the middle class, continued in the year under report and the housing situation can be summed up briefly by recording that very little in the way of relieving the acute shortage of houses was undertaken during 1956 and very little accomplished. This indeed is a great misfortune, as there is no public health problem in the Urban Sanitary District that needs more urgent attention and whose demands are more pressing.

In fact the position is such that because of the overcrowding that is a direct result of this shortage and of the chronic state of disrepair and dilapidation in which most dwelling houses find themselves, and because also of the fact that sanitary conveniences particularly suffer most from the neglect and indifference that landlords exhibit towards their buildings in the existing state of affairs, it would come as no surprise to any public health official who knows the areas in question and is acquainted with the facts as they are, if infectious disease were to attain epidemic proportions.

The Public Health Department is fully seized of the possibilities of the situation and is on the alert to prevent the occurrence and limit the spread of infectious disease, but is also fully aware that a state of affairs beyond its control could easily eventuate.

In fact the number of dilapidated dwelling houses which have collapsed in the year under report has been increasing with each succeeding month and the displaced occupants are hard put to it to find alternative accommodation. The result is more overcrowding, the erection of more improvised hovels in the Shanty Town Area, the occupation of storerooms, kitchens, outbuildings of all sorts as dwellings with all the attendant evils and insanitary conditions that such a state of affairs entails.

Slum Clearance in the downtown areas of the City which was undertaken with the specific object of getting rid of these selfsame conditions in the heart of the City, which was recognised as urgent and acute when it began thirteen years ago and which should have been completed long ago, continued its slow snail-like progress during the year 1956 due to the fact that only a limited sum of money was allocated in the year's estimates for the purpose. At this slow pace it is inevitable that only the surface of the problem is being scratched and as the population increases and more and more barracks become unfit for human occupation and even collapse, it is not surprising to find that the various sub-districts of Belmont and East Dry River, St. James and Woodbrook are now bearing the brunt of the overcrowding and cottage dwellings in these areas are now being occupied by so many people without the necessary basic essential sanitary conveniences that it is inevitable that sooner or later slum clearance be undertaken in these sub-districts as well.

The solution is, of course, made no better or easier by the fact that hardly any dwellings are constructed to take the place of these barrack ranges or old houses when reconstruction takes place, it being the invariable rule that business places or commercial dwellings take their place because of the higher rentals that these buildings fetch.

On the whole it is true to say that very few dwelling houses were constructed in the year under report; nothing came of the Mucurapo lots on the old Cipriani airfield and the filling in of the Cocorite Swamp still remains a project on paper.

John John and Shanty Town

These two areas at the eastern entrance to our City remain in *statu quo* in the year under report, a standing monument to our inability to deal with a slum area that is the direct result of the acute housing situation.

If there is disorder and dilapidation in John John, if there is lack of sanitation, and inadequate and insufficient disposal of refuse and faecal matter, if there is an insufficient water supply, and dirt, misery and poverty, these insanitary features are repeated fifty fold in the Shanty Town Area.

These areas are a source of great danger to the general health of the City and the complacence of St. Clair and Woodbrook could easily be rudely shocked by an epidemic of infectious disease starting in these areas and spreading like wild fire through the length and breadth of the City. There is no desire on my part to exaggerate the existing situation or to keep makng reference year after year to what is so well known and recognised, but I will be failing in my duty if I did not lay stress on the dangers inherent in the situation existing at John John and Shanty Town.

It may be a question of funds but first things come first and situations fraught with grave potential dangers must be dealt with by radical measures. I must repeat once more that John John and Shanty Town must be eliminated forthwith and the many plans that so far have been formulated on paper for their replacement must be translated into actual clearance and building on the land.

VITAL STATISTICS OF THE DISTRICT

Comparative Summary of Vital Statistics

(Unless otherwise stated, rates are per 100,000 population)

	1921	1954	1955	1956
Area of City—acres (pastures and open spaces included)	1,793	2,550	2,550	2,550
Estimated population (mean)... ...	61,386	114,150	117,000	120,000
Density of population (persons per acre)	34.2	45	46	47
Total live births	1,687	5,403	3,078	2,621
Birth rate	2,728	4,733	2,631	2,184
Still births registered	154	268	89	67
*Still birth rate	91.3	49.60	28.92	25.56
Total deaths	1,659	1,028	1,067	1,120
Death rate	2,683	901	903	933
Natural increase of population ...	28	4,375	2,011	1,501
Deaths under one year	287	150	138	158
*Infant mortality rate	170.12	27.76	44.83	60.28
*Maternal mortality rate	—	2.59	5.20	4.19
Death Rates :				
Notifiable infectious diseases	621	77	72	71
Pulmonary tuberculosis	249	19	12	11
Tuberculosis (other forms)	26	3	3	2
Enteric fever	125	3	1	—
Pneumonia (all forms)	197	51	56	56
Bronchitis	136	20	21	10
Diphtheria	2	1	1	—
Malaria	89	1	—	1
Syphilis	21	7	10	15
Diarrhoea and enteritis	191	32	38	47
Influenza	26	1	—	1
Ankylostomiasis	15	2	1	—
Bright's disease and nephritis	209	22	19	22
Diseases of the heart and blood vessels	265	230	221	239
Diseases of the nervous system including cerebral haemorrhage	170	133	144	132
Cancer and other malignant diseases ...	63	84	89	87

*Per 1,000 births.

Census population of City—April, 1946: 93,198.

Colony's Mean Population: 742,500.

Acreage and Population

The acreage of the City remains the same as it was last year, viz. 2,550 acres, which size it attained in the year 1946 when the 168 acres of reclaimed lands south of Wrightson Road were legally included within the City's limits by a redefinition of the southern boundary of the City.

This area of 2,550 acres includes the Queen's Park Savannah which occupies an area of 299 acres and which can truly be labelled the lung of the City of Port-of-Spain.

Here are situated the Turf Club, the playing fields of the Football Association and various other playing fields for the games of cricket, football, basketball, &c.

The estimated mean population of the City, that is the population at midnight June 30th 1956, was according to the Registrar General's formula, 120,000. representing a natural increase of population by 2,501 over the population for the previous year. It is on this figure of the mid-year population that all rates, morbidity as well as mortality, are calculated for the year.

The distribution of the estimated mean population in the various sub-districts of the City was estimated to be as follows: City Proper 41,286, St. Clair 2,012, East Dry River 26,638, Belmont 20,747, Woodbrook 15,228, St. James 14,070.

It is fully recognised, of course, that these latter figures do not by any means represent the actual resident population of these sub-districts, but they do furnish a rough estimate of the population on which various rates are worked out and they at least follow the time honoured custom of dividing the City into those well known sub-districts which were at one time outside the limits of the City but which one after the other have been included in the City, retaining their original names as they came in. Their limits, for purposes of convenience, are somewhat arbitrarily defined. It is proposed, however, for the purpose of greater accuracy to distribute the estimated total population among the various Wards of the City seeing that these Wards are clearly defined by section of the Port-of-Spain Corporation Ordinance, Ch. 33. No. 1. This, however, cannot be done with any degree of accuracy before the next census year which is now stated to be 1960.

The census population of the City was found to be as follows—in 1921, 61,580; in 1930, 70,339; in the year 1946, 93,198.

Births and Birth Rates

The number of live births recorded for the year under report totalled 2,617 as compared with 3,078 in the year 1955 giving a birth rate of 2,184 per 100,000 population.

The lower number of births recorded is in large measure due to the fact that, as was stated in the last annual report, we are now receiving at the Public Health Department returns that give the actual names and addresses of the mothers of all infants who are born within the limits of the City whether they occur at the General Hospital, Port-of-Spain, at one or other of the nursing homes, scattered about the City, or at private residences in the City. By carefully analysing the data and examining the place of usual residence of the mothers and fathers, it is possible to refer these births to the towns and villages where they rightly belong, for it is a well known fact that large numbers of expectant mothers journey to the City to enable them to get more prompt and skilled attention during confinement and their babies are born actually within the limits of the City.

As a direct result a large number of births that previously were looked upon as belonging to the City were eliminated in the interests of more accurate statistics and the figure of total births is therefore lower and the birth rate correspondingly reduced.

But apart altogether from this important consideration there is reason for believing that the birth rate may actually be beginning to show a decline.

Corresponding with this decline in the birth rate is, as is to be expected, an increase in the infant mortality rate since the rate has the number of live births recorded as denominator.

The infant mortality rate for 1956 worked out to be 60.28 as compared with 44.83 in the previous year. Actually however, there were 158 deaths of infants under one year as compared with 138 in the year 1955.

Deaths and Death Rates

Total deaths recorded during the year 1956 were 1,120, 53 more than in the previous year with a figure of 1,067 deaths.

This gives a death rate of 933 per 100,000 population, a higher death rate than that recorded in 1955, 903 per 100,000.

These figures can be considered fairly accurate as the names and addresses of the dead have always been entered in the death returns that reach the Public Health Department and again deaths are always referred back to the districts to which they properly belong when compiling the vital statistics for the year.

This figure of 933 per 100,000 population though somewhat higher than the figure of 901 and 903 recorded in the year 1954 and 1955, is not a high rate and does not compare unfavourably with the corresponding rate in the cities of other tropical and sub-tropical countries whose resources are greater and facilities more liberal.

The death rate for the Colony of Trinidad and Tobago for the year 1956 worked out to be 960 per 100,000 population.

If the major works to which I have again this year made reference in this report, were put into execution, particularly the major works of sewerage, drainage, the widening of lanes and streets and the provision of an adequate water supply, I have no doubt that the death rate would show a further decline.

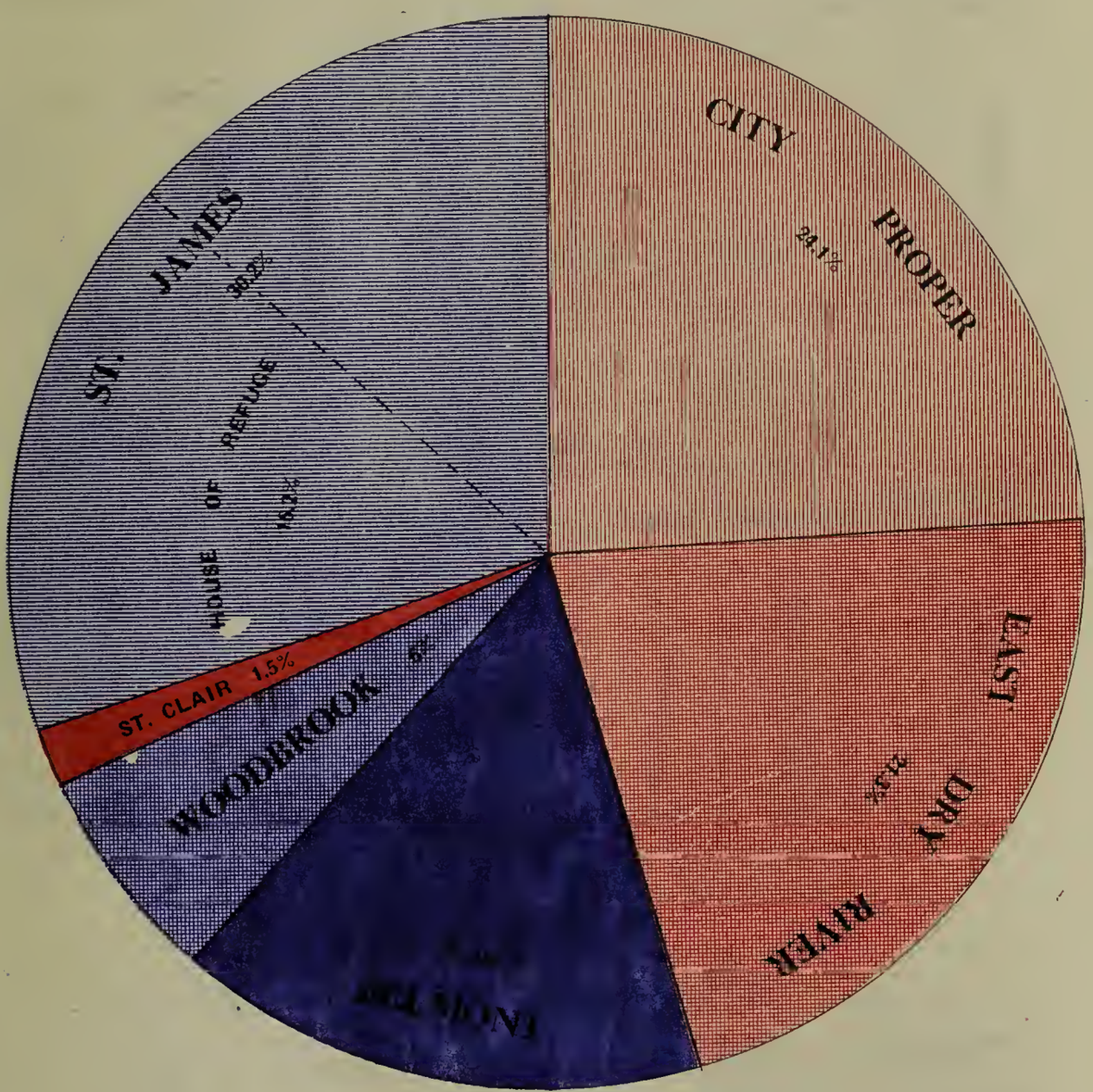
CHART A
Port-of-Spain
Birth Rates and Death Rates per 100,000 Population 1920-1956

* Adjusted Rate (1955): City residents Births and Deaths only.

CHART B

Port-of-Spain

Percentage Distribution of Deaths in Sub-Districts of the City 1956



Births and Deaths Rate, 1956

Births 1956				Deaths 1956			
Males	Females	Both Sexes	Birth Rate per 100,000 population	Males	Females	Both Sexes	Death Rate per 100,000 population
1,252	1,269	2,621	2,184	586	534	1,120	933

Deaths in Sub-Districts of the City, 1956

Sub-District	Mean Population	Deaths				Total Deaths Sub-Districts	Rate per 100,000 population
		Place of Occurrence					
		Home, &c.	General Hospital	Royal Gaol	House of Refuge		
City Proper	41,286	163	95	12	—	270	654
St. Clair	2,012	16	1	—	—	17	845
East Dry River	26,635	99	140	—	—	239	897
Belmont	20,749	100	89	—	—	189	911
Woodbrook	15,228	42	25	—	—	67	440
St. James	14,090	62	66	—	210	338	2,399
Total	120,000	482	416	12	210	1,120	933

Age Distribution of Deaths, 1956

Period	Males	Females	Both Sexes	Percentage of Total Mortality at All Ages
Under 1 year	91	67	158	14.11
1– 5 years	17	15	32	2.86
6–10 do.	3	4	7	0.63
11–20 do.	10	4	14	1.25
21–30 do.	17	19	36	3.21
31–40 do.	30	22	52	4.64
41–50 do.	46	31	77	6.87
51–60 do.	88	75	163	14.55
Over 60 years	284	297	581	51.88
Total	586	534	1,120	—

Comparison of Deaths at different Age Periods, 1928-56

Period	Total Deaths at All Ages	Deaths under 1 Year		Deaths 1–5 Years		Deaths 56–60 Years		Deaths over 60 Years	
		No.	Percentage of Total Deaths	No.	Percentage of Total Deaths	No.	Percentage of Total Deaths	No.	Percentage of Total Deaths
Yearly Averages									
1928-32 ...	1,327	230	17.42	81	6.06	94	7.09	336	25.10
1933-37 ...	1,167	215	18.24	62	5.29	87	7.57	289	24.74
1938-42 ...	1,622	275	16.85	68	4.21	117	7.20	566	34.92
1943 ...	1,862	283	15.20	102	5.48	131	7.04	674	36.20
1944 ...	1,620	248	15.31	77	4.75	106	6.54	598	36.92
1945 ...	1,526	239	15.66	71	4.65	86	5.64	561	36.76
1946 ...	1,396	241	17.26	77	5.52	95	6.81	493	35.32
1947 ...	1,385	231	16.68	49	3.54	92	6.64	536	38.70
1948 ...	1,191	177	14.86	45	3.78	66	5.54	491	41.23
1949 ...	1,147	171	14.91	57	4.97	85	7.41	524	45.68
1950 ...	1,170	168	14.36	75	6.41	76	6.50	526	44.96
1951 ...	1,243	167	13.43	43	3.46	79	6.35	602	48.43
1952 ...	1,094	137	12.52	48	4.39	77	7.04	540	49.36
1953 ...	1,108	157	14.17	41	3.70	67	6.05	524	47.29
1954 ...	1,028	150	14.59	36	3.50	79	7.69	484	47.08
1955 ...	1,067	138	12.93	27	2.53	78	7.31	542	50.80
1956 ...	1,120	158	14.11	32	2.86	85	7.59	581	51.88

Causes of Deaths

Causes of death are now classified in accordance with the Intermediate List (150 causes) of the International Statistical Classification. The table published below gives the causes of deaths as they affected the inhabitants of the City during the year 1956.

Of the 1,120 deaths recorded in the table, the largest number 287 was claimed by VII Diseases of the Circulatory System.

This figure represents an increase of 28 on the figure for the previous year 259.

Next in order of importance came VI Diseases of the Nervous System and Sensory Organs which were responsible for 159 victims, and II Neoplasms (cancer and other malignant diseases) which was the cause of death in 104 cases.

These causes represent the major killing diseases in so far as the inhabitants of the City are concerned and this picture has remained practically constant during the past ten years.

Diseases of the Circulatory System continue to occupy pride of place and there is as yet no let up in the toll that these diseases are exacting of the population of the City.

Notifiable infectious diseases claimed 85 deaths during 1956 of which Pneumonia was responsible for 67, as compared with 65 in the previous year.

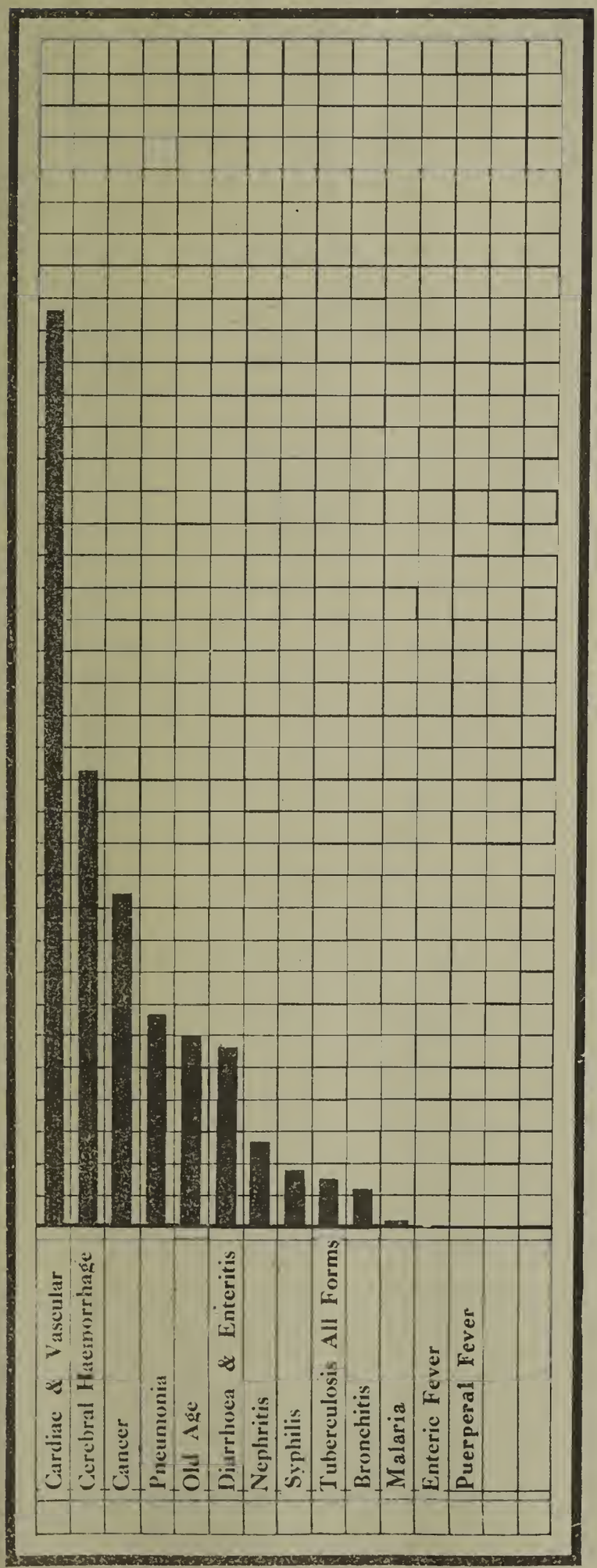
Again in the year under report Diarrhoea and Enteritis claimed more deaths than in the previous two years, viz. 57.

Causes of Deaths 1956—(International Classification)

Intermediate List No.	Cause Groups	Detailed List No.	Total
	I—Infective and Parasitic Diseases		
A 1	Tuberculosis of respiratory system	001–008	13
A 2	Tuberculosis of meninges and central nervous system	010	1
A 3	Tuberculosis of intestines, peritoneum and mesenteric glands	011	—
A 4	Tuberculosis of bones and joints	012	—
A 5	Tuberculosis, other forms :		
	02 All other forms	014, 016–019	
A 6	Congenital Syphilis	020	—
A 8	Tabes Dorsalis	024	—
A 9	General paralysis of insane	025	—
A 10	All other syphilis	026–029	18
A 11	02 Other gonococcal infections	031–035	—
A 12	Typhoid fever	040	—
A 13	02 Other Salmonella infections	042	—
A 16	Dysentery, all forms :		
	01 Bacillary dysentery	045	3
	03 Other unspecified forms of dysentery	047, 048	—
A 20	Septicaemia and pyaemia	053	3
A 21	Diphtheria	055	—
A 22	Whooping cough	056	—
A 23	Meningococcal infections	057	—
A 25	Leprosy	060	—
A 26	Tetanus	061	6
A 29	Acute infectious Encephalitis	082	—
A 34	Infectious hepatitis	092	3
A 37	03 Falciparum malaria (malignant tertian)	112	1
A 41	Ankylostomiasis	129	—
A 42	All other disease due to helminths or ascariasis	130. 0	1
A 43	All other diseases classified as infective and parasitic :		
	01 Lymphgranuloma venereum	037	—
	02 Granuloma inguinalo, venereal	038	—
	08 Chicken pox	087	1
	22 Herpes zoster	088	1
	25 All other diseases classified as infective and parasitic	132–134	—
	II—Neoplasms		
A 44	Malignant neoplasm of buccal cavity and pharynx	140, 148	3
A 45	Malignant neoplasm of oesophagus	150	2
A 46	Malignant neoplasm of stomach	151	14
A 47	Malignant neoplasm of intestine, except rectum	152, 153	10
A 48	Malignant neoplasm of rectum	154	4
A 49	Malignant neoplasm of larynx	161	3
A 50	Malignant neoplasm of trachea and of bronchus and lung not specified as secondary	162, 163	4
A 51	Malignant neoplasm of breast	170	14
A 52	Malignant neoplasm of cervix uteri	171	12
A 53	Malignant neoplasm of other unspecified parts of utorus	172–174	11
A 54	Malignant neoplasm of prostate	177	4
A 55	Malignant neoplasm of skin	190–191	3
A 56	Malignant neoplasm of bone and connective tissue	196, 197	2
A 57	Malignant neoplasm of all other and unspecified sites	155–160 175, 176 198, 199	13
A 58	Leukaemia and Aleukaemia	204	2
A 59	Lymphosarcoma and other neoplasms of lymphatic system	200–203 205	3
A 60	Benign neoplasms and neoplasms of unspecified nature	210–239	1

Chart C
Port-of-Spain

Principal Individual
CAUSES OF DEATHS 1956



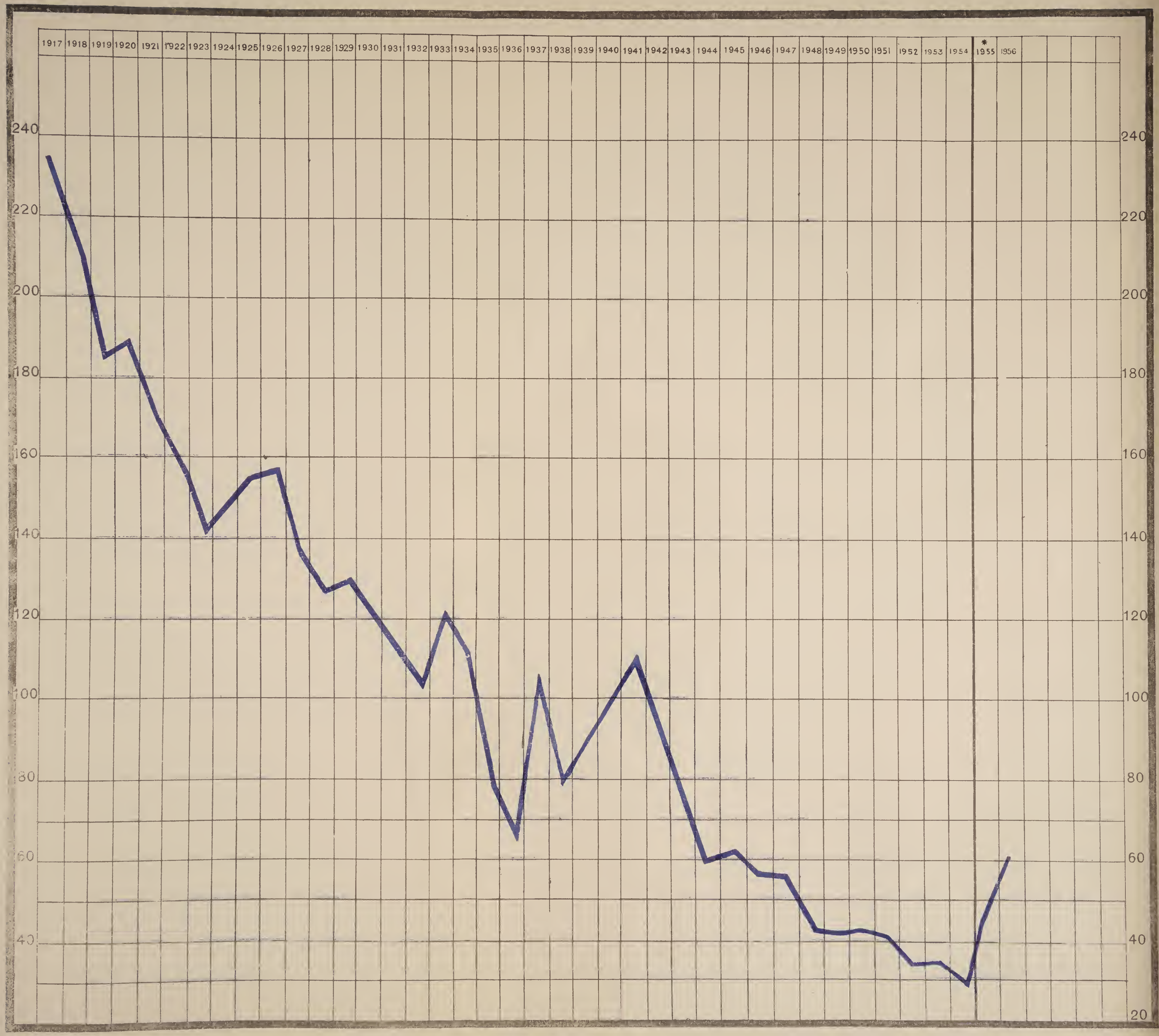
Causes of Death—(International Classification)—*Continued*

Intermediate List No.	Cause Groups	Detailed List No.	Total
	III—Allergic, Endocrine System, Metabolic, and Nutritional Diseases		
A 62	Thyrotoxicosis with or without goitre	252	1
A 63	Diabetes mellitus	260	28
A 64	Avitaminosis and other deficiency states :		
	01 Beri beri	280	—
	04 Vitamin B deficiency, except beri beri and pellagra ...	286.2	1
	05 Other deficiency states	283–286	3
	IV—Diseases of the Blood and Blood-Forming Organs		
A 65	Anaemias :		
	01 Pernicious and other hyperchromic anaemias	290	—
	03 Other specified and unspecified anaemias	292, 293	6
A 66	Allergic disorders, all other endocrine, metabolic and blood diseases :		
	01 Asthma	241	4
	02 All other allergic, disorders, endocrine, metabolic and blood diseases	253	2
	V—Mental, Psychoneurotic and Personality Disorders		
A 67	Psychoses	300–309	3
A 68	Psychoneuroses and disorders of personality	310–324 326	
	VI—Diseases of the Nervous System and Sensory Organs		
A 70	Vascular lesions affecting contral nervous system	330–334	143
A 71	Nonmeningococcal meningitis	340	5
A 72	Multiple sclerosis	345	—
A 73	Epilepsy	353	2
A 77	02 Otitis media and mastoiditis	391–393	3
A 78	02 All other diseases of the nervous system and sense organs ...	341–344 350–352 354–357 360–369 395–398	6
	VII—Diseases of the Circulatory System		
A 79	Rheumatic fever	400–402	4
A 80	Chronic rheumatic heart disease	410–416	3
A 81	Arteriosclerotic and degenerative heart disease	420–422	183
A 82	Other diseases of the heart	430–434	20
A 83	Hypertension with heart disease	440–443	48
A 84	Hypertension without mention of heart	444–447	20
A 85	Diseases of arteries	450–456	7
A 86	Other diseases of the circulatory system	460–468	2
	VIII—Diseases of the Respiratory System		
A 87	Acute upper respiratory infections	470–475	2
A 88	Influenza	480–483	1
A 89	Lobar pneumonia	490	17
A 90	Broncho pneumonia	491	37
A 91	Primary atypical, other, and unspecified pneumonia	492, 493	13
A 92	Acute bronchitis	500	2
A 93	Bronchitis, chronic and unqualified	501, 502	10
A 95	Empyema and abscess of lung	518, 521	2
A 96	Pleurisy	519	2
A 97	All other respiratory diseases :		
	01 Pneumoconiosis	523	1
	02 All other respiratory diseases	511–517 520–522 524–527	6
	IX—Diseases of the Digestive System		
A 99	Ulcer of stomach	540	5
A100	Ulcer of duodenum	541	2
A101	Gastritis and duodenitis	543	3
A102	Appendicitis	550–553	4
A103	Intestinal obstruction and hernia	570	8
A104	Gastro-enteritis and colitis, except diarrhoea of the newborn :		
	01 Gastro-enteritis and colitis between 4 weeks and 2 years ...	571.0	41
	02 Gastro-enteritis and colitis, ages 2 years and over... ...	571.1	16
	03 Chronic Enteritis and ulcerative colitis	572	5
A105	Cirrhosis of Liver	581	13
A106	01 Cholelithiasis	584	1
	02 Cholecystitis without mention of calculi	585	1
A107	Other diseases of digestive system	536–539 542–544 545 573–580 582–583 586–587	10

Causes of Death—(International Classification)—*Continued*

Intermediate List No.	Cause Groups	Detailed List No.	Total
	X—Diseases of the Genito-Urinary System		
A108	Acute Nephritis	590	4
A109	Chronic and other unspecified nephritis	591–594	23
A110	Infections of kidneys	600	1
A111	Calculi of urinary system	602–604	—
A112	Hyperplasia of prostate	610	6
A114	02 Disorders of menstruation	634	2
A114	03 All other diseases of the genito-urinary system	601–603 605–609 611, 612 614–617 622–623 635–637	6
	XI—Deliveries and Complications of Pregnancy, Childbirth, and the Puerperium		
A116	01 Puerperal eclampsia	685	—
	02 All other toxaemias of pregnancy and the puerperium	642, 652, 686	1
A117	Haemorrhage of pregnancy and childbirth :		
	01 Placenta praevia	643	—
	02 Haemorrhage of pregnancy	644, 670	3
A118	Abortion without mention of sepsis	650	—
A119	Abortion with sepsis	651	4
A120	All other complications of pregnancy and childbirth :		
	01 Ectopic pregnancy	645	—
	03 Delivery complications	673–675	—
	04 Other complications of pregnancy	646, 648 649, 676 680, 683	1
	XII—Diseases of the Skin and Cellular Tissues		
A121	Infections of skin and subcutaneous tissue	690–698	2
	XIII—Diseases of the Bones and Organs of Movement		
A122	Arthritis and spondylitis	720–725	6
A123	Rheumatism unspecified	726–727	—
A126	All other diseases of the skin and musculoskeletal system :		
	01 Chronic ulcer of skin	715	1
	02 All other diseases of skin	716	2
	03 All other diseases of musculoskeletal system	731–736 738, 744	—
	XIV—Congenital Malformations		
A127	Spina bifida and meningocele	751	1
A128	Congenital malformation of Circulatory System	754	4
A129	All other congenital malformations	750–752 753, 755 759	1
	XV—Certain Diseases of Early Infancy		
A130	Birth Injuries	760–761	1
A131	Post-natal asphyxia and atelectasis	762	7
A132	Infections of the newborn :		
	01 Diarrhoea of newborn (under 4 weeks)	764	2
	03 Sepsis of newborn	767, 768	2
	04 Other infections of newborn	763–766	—
A133	Haemolytic diseases of newborn	770	1
A134	All other defined diseases of early infancy :		
	02 Haemorrhagic disease of newborn	771	2
	03 Nutritional maladjustment	772	12
A135	Ill-defined diseases peculiar to early infancy and immaturity unqualified	773, 776	43
	XVI—Symptoms, Senility and Ill-defined Conditions		
A136	Senility without mention of psychosis	794	60
A137	01 Pyrexia of unknown origin	788.8	1
	03 Certain symptoms referable to nervous system and special senses	780	—
	04 Other symptoms referable to nervous system	781	—
	05 Symptoms referable to cardio-vascular and lymphatic system	782	—
	06 Symptoms referable to respiratory sytem	783	1
	08 Symptoms referable to abdomen and lower gastro-intestinal system	785	1
	12 Nervousness and debility	790	—
	14 Uraemia unqualified	792	16
	15 Ill-defined and unknown causes of mortality	795	2
	16 Othor general symptoms	788.1–788.9	4
	"E" XVII—Code Alternative Classification of Accidents, Poisonings, and Violence (External Cause)		
AE138	Motor Vehicles Accident	E810–E825	5
AE140	Accidental poisoning	E870–E985	—
AE141	Accidental falls	E900–E904	—
AE142	Accident caused by machinery	E912	—
AE146	Accidental drowning	E929	2
AE147	02 Foreign body entering other orifice	E928	—
	05 All other accidental causes	E910–E911	—
AE148	Suicide and self-inflicted injury	E970–E979	1
AE149	Homicide and Judicial execution	E980–E985	14

CHART D
Port-of-Spain
Infant Mortality Rates per 1,000 Live Births 1917-1956



* Adjusted Rate (1955): City residents Births and Deaths only

Causes of Death 1956—(International Classification)—*Continued*

Intermediate List No.	Cause Groups	Detailed List No.	Total
	"N" XVII—Code Alternative Classification of Accidents, Poisonings, and Violence (Nature of Injury)		
AN138	Fracture of skull	N800–N804	2
AN139	Fracture of spine and trunk	N805–N809	1
AN140	Fracture of limbs	N810–N829	3
AN143	Head injury (excluding fracture)	N850–N856	—
AN144	Internal injury of chest, abdomen and pelvis	N860–N869	—
AN145	Laceration and open wounds	N870–N908	—
AN148	Burns	N940–N949	4
AN149	Effects of poisons	N960–N979	6
AN150	All other and unspecified effects of external causes	N950–N959 N980–N999	3
	Grand Total		1,120

Infant Mortality

The infant mortality rate is one of the most important of those rates that come under the heading of vital statistics, and no student of vital statistics can afford to ignore the implications of this rate.

In fact, of such significance is this rate that from the very beginning of the Local Sanitary Authority when it was established in January, 1917 by the Public Health Ordinance, Ch. 12. No. 4, the rate has been subjected to careful analysis and special consideration in all monthly and annual reports.

It is not a difficult rate to compile depending as it does on facts which are simple and on data that can be collected comparatively easily, viz., the number of infants under one year old who succumbed per 1,000 live births in the particular year that is the subject of enquiry.

The conditions that must be satisfied are two: one the infants who have died must be born of mothers who are normally, i.e., during the previous six months at least, resident in the area in question and the births that have taken place must be from mothers who are normally, i.e., during the previous six months at least, resident in the area in question.

Deaths of infants in hospital, in nursing homes or private homes in the City whose parents are normally resident in the country must be discounted in the same way that mothers who have come into the City for the purpose of confinement and who are not normally resident in the City cannot have their infants counted as City births.

The infant mortality rate is a fairly sensitive index of progress in environmental hygiene, and in education, and general health, of any community. A high infant mortality rate indicates lack of skilled and readily available ante-natal care, lack of adequate, prompt and skilled maternity services, and insufficient post-natal and home visiting services and even a lack of adequate public health nursing service. It indicates also that the state of general education of the community leaves much to be desired and that health education in all its aspects is lacking, and particularly that there is much leeway to be made up in the health education of mothers and prospective fathers.

It points to the need for education and propaganda to insure that the health and maternity services where they do exist are made use of by the people for whom they were intended and above all that these services can, in fact, be made available in the homes of the people who require them by seeking the assistance and by welcoming the attention of health visitors.

A high infant mortality rate is usually associated with a low general standard of sanitation, a degree of poverty and malnutrition, poor housing accommodation and a lack of basic essential sanitary requirements like sewerage and an adequate water supply.

It is therefore with a certain measure of satisfaction that we record an infant mortality rate that is not high and which has shown a substantial decline from 232.77 per 1,000 live births in the year 1917 when it was possible for the first time to compile accurate statistics, to the figure of 60.28 in the year under report.

This, however, is a rate that is high compared with cities of similar size and climate in other parts of the civilised world where infant mortality rates of 30 or so per 1,000 live births are being recorded regularly.

When one considers that out of a total number of 2,621 births, 158 have died before they have attained the age of one year, it is clear that this is too heavy a price to pay in a city that should be

and can be provided with all the modern facilities and requirements for prompt and safe confinement and that much more effort is needed by those agencies and organisations that are concerned with maternal and child welfare.

Unfortunately there is the feeling that this is not sufficiently appreciated and it would appear that there is need for a complete re-orientation of our attitude to this important matter and a re-dedication to, and intensification of, our efforts directed to this particular line of public health work.

The importance of this work in so far as the benefit and welfare of the state is concerned cannot be over estimated, as the life of an infant saved, apart altogether from the humanitarian aspesct, may very well mean saving the life of a potential breadwinner, a potential benefactor, a potential genius.

The Child Welfare League and the maternity and child welfare services of Government on whose shoulders the burden of this responsibility falls have within their respective capacities been doing as much as they possibly can with the resources at their command, but the Child Welfare League which has borne the brunt of this work ever since it came into being in the year 1917 finds itself with limited funds at its disposal and with a limited number of voluntary workers with which to carry on.

Unless these two defects are made good promptly, the League will be unable to expand its activities to the home of every woman and child in the City so as to be sure that no expectant mother or child fails to come under its care or supervision.

Even existing services which are in need of intensification and expansion may suffer because it is not sufficiently appreciated what an important piece of public health work this is, done as it is in the comparative obscurity of clinics and homes and so not normally "hitting the headlines", but there can be no denying the benefit that has accrued to the community from the activities of the Child Welfare League.

Sixty-six of the 158 deaths of infants under one year that occurred during the year 1956 were of infants under one month; in other words the neo-natal mortality was 42.41 per cent. of the total infant mortality.

It is believed that the neo-natal mortality is due to causes operating during the ante-natal and intra-natal period and this high rate serves to emphasise the fact that whilst the mortality in the case of those infants that survive the first month of extra uterine life is being substantially reduced, hardly any progress whatsoever has been made in so far as the neo-natal mortality is concerned.

If the infant mortality is to be further reduced, the ante-natal causes of that mortality : prematurity, congenital debility, congenital abnormalities, marasmus, malnutrition, anaemia and other ante-natal causes like haemorrhage, &c., &c., must be enquired into critically, and study and research undertaken with a view to discovering the means whereby they can be prevented.

Births and Deaths of Infants under 1 year, 1917-56

Period	No. of Births	No. of Deaths under 1 year	Infant Mortality Rate
Year 1917	1,770	412	232.77
Yearly Averages :			
1918–22	1,700	310	182.94
1923–27	1,862	274	146.96
1928–32	1,925	230	119.13
1933–37	2,248	215	96.05
1938–42	2,913	275	93.84
1943–47	4,026	248	61.94
Average 1918–47	2,446	259	116.94
1948	4,053	177	43.67
1949	4,037	171	42.36
1950	3,905	168	43.02
1951	3,982	167	41.94
1952	4,115	137	33.29
1953	4,499	157	34.90
1954	5,403	150	27.76
1955	3,078	138	44.83
1956	2,621	158	60.28

Causes of Deaths under 1 year, 1956

Causes of Deaths	Neo-Natal Deaths under 1 month	Deaths 1 month and under 1 year	Total	Percentage of Total infant Mortality
Ante-Natal Causes:				
Prematurity	39	4	43	
Marasmus	—	—	—	
Malnutrition	1	8	9	
Congenital Abnormalities	1	1	2	
Congenital Debility	—	—	—	
Congenital Heart Disease	3	—	3	
Anaemia	—	—	—	
Toxic Liver Disease	1	—	1	
Total Ante-Natal	45	13	58	36.71
Intra-Natal Causes:				
Haemorrhage	1	—	1	
Bleeding Cord	1	—	1	
Respiratory Obstruction (Cesarean)	—	—	—	
Total Intra-Natal	2	—	2	1.26
Post-Natal Causes:				
Asphyxia and Atelectasis	7	—	7	
Pneumonia	4	16	20	
Diarrhoea and Enteritis	2	38	40	
Bronchitis	—	2	2	
Icterus Neonatorum	1	—	1	
Pleurisy	—	—	—	
Tuberculosis	—	—	—	
Pulmonary Congestion	—	1	1	
Other Post-Natal Causes	6	21	27	
Total Post-Natal	20	78	98	62.03
GRAND TOTAL	67	91	*158	

*M. 91; F. 67.

Duration of Life of Infants dying under one year of Age, 1956

Duration of Life	No. of Infants	Percentage of total deaths under 1 year	Corresponding percentage 1955
Under 1 day	7	4.43	10.14
1 day and under 2 weeks	48	30.38	39.86
2 weeks and under one month	12	7.60	9.42
Total under 1 month	67	42.41	59.42
1 month to 3 months	27	17.09	15.22
Over 3 to 5 months	21	13.29	5.07
Over 5 to 7 months	22	13.92	7.97
Over 7 to 9 months	9	5.70	9.42
Over 9 to 11 months	11	6.96	2.90
Over 11 and under 1 year	1	.63	—
TOTAL	158	—	—

Neo-Natal Mortality (Deaths under 1 month) 1930-1956

Period	No. of Deaths under 1 month	Percentage of total deaths under 1 year	Neo-Natal Mortality Rate per 1,000 Births
Yearly Average: 1930–34	90.6	38.60	44.03
Year **1935**	91	50.28	39.24
1936	61	40.94	26.58
1937	110	46.41	48.39
1938	117	57.35	45.16
1939	122	50.41	44.33
Average 1935–39	100.2	49.08	40.74
Year **1940**	132	45.36	44.94
1941	137	43.63	47.44
1942	134	41.62	39.42
1943	134	47.35	35.72
1944	117	47.18	28.12
1945	126	52.72	31.72
1946	136	56.43	32.91
1947	133	57.58	32.20
1948	76	42.94	18.75
1949	82	47.96	20.31
1950	82	48.82	21.00
1951	77	46.11	19.34
1952	60	43.79	14.58
1953	84	53.51	18.67
1954	84	56.00	15.55
1955	82	59.42	26.64
1956	67	42.41	25.56

Still Births

The number of still births registered during the year under report numbered 67, the lowest number recorded in the annals of the history of the Local Sanitary Authority, giving a still birth rate of 25.56 per 1,000 live births.

This low figure is due in large measure to the fact that all still births that do not properly belong to the City even though they have taken place within the limits of the City are strictly excluded—a procedure that has been rendered possible by the facility that is now available of getting the actual names and permanent addresses of all mothers that give birth to infants in the City of Port-of-Spain.

The causes of the death of the infant in the mother's womb are not all quite clear but it is fairly certain that they are intimately bound up with the injuries and diseases of pregnancy and confinement. Apart, however, from the accidents and diseases of pregnancy and confinement that are known and are being subjected to further study and for which prompt and skilled attention during the whole ante-natal and intra-natal period are absolutely necessary, the chronic system diseases like syphilis, malaria, chronic nephritis, diabetes, tuberculosis affecting either parent, have a bearing on the still birth mortality and every prospective mother or father who is a victim of these diseases should be brought under skilled care and treatment immediately.

Even if we admit, as we must admit, that a substantial lowering of the infant mortality has taken place, we must not, at the same time, omit to take into consideration the fact that very little change has taken place in the still birth rate.

Still Births, 1956

Year	Total Still Births	Rate per 1,000 Live Births
1956	67	25.56
1955	89	28.92
1954	268	49.60
1953	225	50.01
1952	207	50.30
1951	193	48.47
1950	165	42.25
1949	244	60.44
1948	223	55.02
1947	220	53.49
1946	225	54.44
1945	224	56.39
1944	265	63.69
1943	230	61.32
1942	257	75.61
1941	211	73.06
1940	214	72.86
1939	190	69.04
1938	171	66.00

Maternal Mortality

The maternal mortality rate is the number of deaths of mothers that have occurred in the year under report per 1,000 live births in that year.

The lower the number of births that take place in any particular year the greater the maternal mortality.

As was stated in the last annual report, a much more accurate figure for the maternal mortality rate is being arrived at since it has become possible to eliminate all births that take place within the limits of the City but do not really belong to the City.

A healthy mother and a healthy father should conceive a healthy infant which should be born healthy with no adverse effect on the mother, and grow up normally. Mothers, however, continue to die both during pregnancy and childbirth.

There is need, therefore, for constant care and attention combined with skilled medical services during the whole of the ante-natal and intra-natal period, if we hope ever to eliminate or reduce this mortality.

During the year under report 11 deaths of mothers were registered at the Department, 3 of which were due to haemorrhage.

Causes of Maternal Deaths, 1956

Causes of Maternal Deaths	Under 16	16 to 25	26 to 35	36 and upwards	Total All Ages	Rate per 1,000 births	
						1956	Average 1951–55
Puerperal Sepsis	—	—	—	—	—	—	—
Eclampsia	—	—	—	—	—	—	—
Haemorrhage	—	1	2	—	3	1.14	.46
Pernicious Vomiting	—	—	—	1	1	.38	—
*Other Causes	—	2	4	1	7	2.67	2.01
TOTAL	—	3	6	2	11	4.19	2.47

* Other Causes include Abortion, Septic Abortion, Ectopic Gestation, delivery complication.

The Pre-School Child

The pre-school child of one year to five years is in need of as much medical care and attention as the infant under one year of age and the school child of 5 to 15 years. This fact is not sufficiently appreciated by those who have the care of children at this age period with the result that compared with the infant and school child the one to five year child is almost completely neglected.

It is at this period of life that the mental and physical foundation is being laid and seeing that "the child is father to the man" it is a matter of imperative necessity that a sound mind is laid in a sound body.

Yet after the care and attention that is lavished on the infant at the clinic and in the home, the child seems lost between one and five years and only appears again so to speak at the beginning of school life. Very often when school life begins the initial medical examination reveals defects, deformities, and diseases that could have been prevented if the child had been given the medical care and attention that it deserves during the one year to five year period.

It is, therefore, cause for great regret that child welfare authorities do not lay more stress on the necessity for the continuous care of the child right up to the school leaving period. Health visitors should be directed to pay special attention to this aspect of child life and in their visits to the homes they should make every effort to insure that the child at this period of life goes to a toddlers' clinic or attends a nursery where, if necessary, it can be left during the day whilst the mother goes out to work—if it is necessary for her to go out to work—and where it can be given additional nourishment in the way of dried or fresh milk and medical and dental treatment where this is necessary.

This, of course, underlines the necessity for more child welfare clinics and day nurseries which in turn depends on the availability of funds for the purpose.

There can, however, be no doubt that this aspect of child welfare work is more neglected and at the same time can be more productive of beneficial results, than any other in the whole field of maternity and child welfare.

Causes of Death at Ages 1-5—1956

Groups	Group Total	Percentage of Total Mortality at ages 1–5
Diseases, &c., attributable to Ante-Natal Causes : Congenital Cardiac Failure 2 ; Congenital Haemolytic Anaemia 1 ...	3	9.37
Communicable Diseases : Chicken Pox 1 ; Pneumonia 6 ; Tuberculosis 2	9	28.13
Diseases of the Nervous System : Nil	—	—
Diseases of the Respiratory System : Bronchitis 2 ; Pleurisy 1	3	9.37
Diseases of the Digestive System : Gastro-Enteritis 4 ; Peritonitis 1	5	15.63
Other Causes : Nutritional Anaemia 3 ; Pyrexia 1 ; Multiple Injuries 1 ; Burns 1 ; Acute Rheumatic Fever 1 ; General Emaciation 1 ; Nephritis 1 ; Ill-defined Causes 3	12	37.50
	32*	—

*M—17 : F—15

PREVALENCE OF AND CONTROL OVER INFECTIOUS DISEASES

Notifiable Infectious Diseases

The prevention of the occurrence of infectious diseases and the limitation of their spread, if and when they occur, are among the main pre-occupations of a public health department and the investigation of cases of infectious diseases, whether notified or not, their effective isolation in hospital if at all possible, the close supervision of contacts, their inoculation with vaccine or serum, whenever an effective prophylactic is available, the disinfection of premises and fomites, the elimination of the source and the destruction of the vector of infectious diseases constitute one of the most important duties that the staff of the Public Health Department is called upon to perform.

The infectious diseases that have been declared notifiable in accordance with Section 103 of part XIV of the Public Health Ordinance Ch. 12. No. 4 are now 21, malaria having been declared a notifiable infectious disease in March, 1956. Of these, 5 are the well known dangerous infectious diseases and 2, typhoid fever and anthrax, have been proclaimed dangerous infectious diseases, the former in 1937, the latter in 1938.

These notifiable infectious diseases are listed on the Notification Forms which are supplied by the Public Health Department free of charge to all practitioners in the Urban Sanitary District.

Practitioners on the whole are alive to their statutory duty in this regard and keep the Department fully informed by early notification of cases of infectious disease; there are, however, practitioners who have to be reminded of their duty in this particular regard but who comply promptly as soon as their lapses have been brought to their attention.

Some infectious diseases can be described as "well notified" i.e. they are kept constantly in mind and are promptly notified on the slightest suspicion which is, of course, in keeping with the law, such as chicken pox or typhoid fever; others again are oftener than not notified just before a fatal outcome becomes apparent, like pneumonia and even pulmonary tuberculosis.

I have on several occasions indicated to practitioners that notification of infectious diseases should take place at the earliest possible opportunity as soon as the merest suspicion of infectious disease has been aroused and that the notification should preferably be by telephone to be followed by the official notification form duly filled in, which should be delivered by hand to the Department.

It is when and only when early and effective isolation of infectious disease is resorted to that the disease can be brought under control and its spread to the rest of the community prevented. It is of course inevitable in these circumstances that errors of diagnosis be made but it is remarkable how few and far between such errors have been, and the added precaution of referring whenever at all possible the suspected case to hospital enables a wrong diagnosis to be corrected later on.

During the year under report 267 cases of infectious diseases were notified to the Department and 85 deaths from notifiable infectious diseases recorded.

The figure of 267 represents the lowest number of cases of infectious disease notified to the Public Health Department since its establishment in the year 1917; 85 deaths represent, however, the third lowest number of deaths recorded, 83 being certified in the year 1953 and 84 in the year 1955.

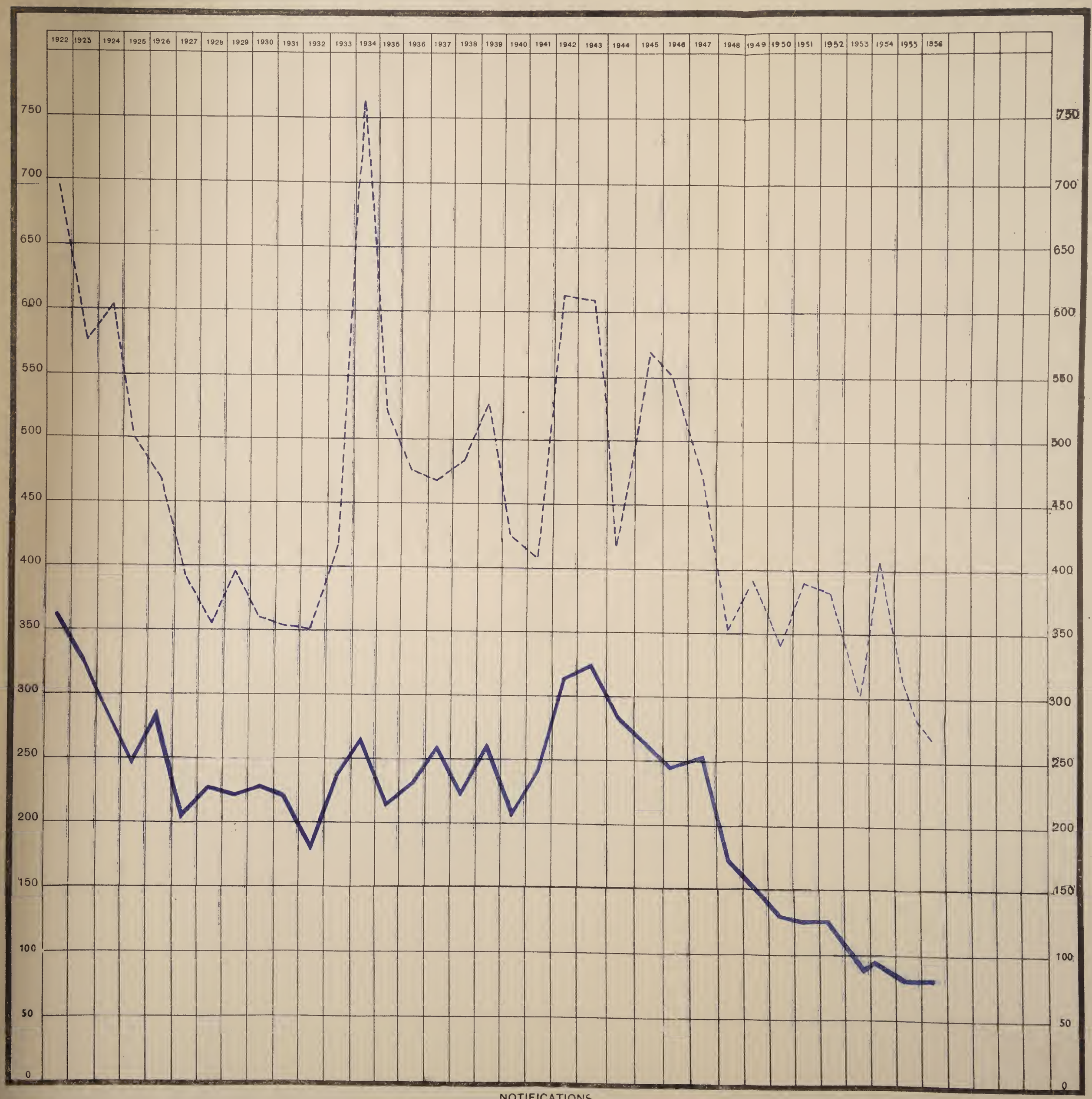
If there is any doubt that the notifications received at the Public Health Department do indicate fairly accurately the number of cases occurring in the Urban Sanitary District and if it is felt that no great reliance can be placed on these figures, the decline in the number of deaths reported surely resolves that doubt, for all deaths must be registered, and no burial can take place without a death certificate; there can, therefore, be no error in failure to report deaths; indeed if error there be in the death returns it can only be an error in diagnosis of the actual cause of death.

Analysis of the table hereunder listed shows that the bulk of the notifications was made up of chicken pox, 101 cases, pulmonary tuberculosis, 85 cases and pneumonia, 38 cases.

Infectious Diseases—Notifications and Deaths—1946-1956

Infectious Diseases	Cases Notified				Deaths			
	Average 1946–50	Average 1951–55	1955	1956	Average 1946–50	Average 1951–55	1955	1956
Diphtheria	20.4	25.4	20	17	2	1	1	—
Membranous Croup ...	—	.2	—	—	—	—	—	—
Typhoid or Enteric Fever ...	39.4	25.6	13	9	5.6	4	1	—
Plague	—	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—	—
Yellow Fever	—	—	—	—	—	—	—	—
Small Pox (Alastrim) ...	—	—	—	—	—	—	—	—
Pulmonary Tuberculosis ...	176.2	133.8	120	85	109.2	22.2	14	13
Tuberculosis (other forms) ...	8.2	3.8	1	3	11	6.4	3	3
Pneumonia	72.2	56.4	39	38	60.8	65.4	65	67
Ophthalmia Neonatorum ...	5.6	7.0	7	12	—	—	—	—
Chicken Pox	91.4	97.2	113	101	—	—	—	1
Encephalitis Lethargica ...	—	.4	—	—	.6	—	—	—
Acute Poliomyelitis ...	1.8	8.0	2	—	.6	—	—	—
Cerebro-Spinal Fever ...	1.2	.6	1	—	—	—	—	—
Typhus Fever	—	—	—	—	—	—	—	—
Puerperal Fever	4	.2	1	—	—	1	—	—
Acute Ascending Myelitis ...	—	—	—	—	—	—	—	—
Anthrax	—	—	—	—	—	—	—	—
Malaria	—	—	—	2	—	—	—	1
Grand Total ...	420.4	358.6	317	267	189.8	100.0	84	85
Rate per 100,000 Population	420	322	271	222	192	90	72	71

CHART E
Port-of-Spain
Infectious Diseases – Notifications and Deaths 1922-1956



Distribution of Cases and Deaths from Notifiable Infectious Diseases, 1956

Diseases	City Proper		St. Clair		East Dry River		Belmont		Woodbrook		St. James	
	Cases notified	Deaths	Cases notified	Deaths	Cases notified	Deaths	Cases notified	Deaths	Cases notified	Deaths	Cases notified	Deaths
Diphtheria	5	—	—	—	3	—	4	1	4	—	1	—
Membranous Croup ...	—	—	—	—	—	—	—	—	—	—	—	—
Typhoid or Enteric Fever ...	1	—	—	—	3	—	1	1	1	—	3	—
Plague	—	—	—	—	—	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—	—	—	—	—	—
Yellow Fever	—	—	—	—	—	—	—	—	—	—	—	—
Small Pox (Alastrim) ...	—	—	—	—	—	—	—	—	—	—	—	—
Pulmonary Tuberculosis ...	20	4	—	—	33	3	12	3	7	1	13	2
Tuberculosis (other forms)...	1	1	—	—	1	1	1	1	—	—	—	—
Pneumonia (all forms) ...	8	13	—	1	12	13	5	9	5	4	8	27
Ophthalmia Neonatorum ...	1	—	—	—	3	—	3	—	2	—	3	—
Chicken Pox	36	1	—	—	27	—	28	—	3	—	7	—
Encephalitis Lethargica ...	—	—	—	—	—	—	—	—	—	—	—	—
Acute Poliomyelitis ...	—	—	—	—	1	—	—	—	—	—	—	—
Cerebro-spinal Fever ...	—	—	—	—	—	—	—	—	—	—	—	—
Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—
Acute Ascending Myelitis ...	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Fever	—	—	—	—	—	—	—	—	—	—	—	—
Anthrax	—	—	—	—	—	—	—	—	—	—	—	—
Malaria	—	—	—	—	—	—	—	—	1	1	—	—
Grand Total ...	72	19	—	1	82	17	55	13	23	6	35	29
Rate per 100,000 population in each Sub-district ...	174	46	—	50	308	64	265	63	151	39	248	206

Notifiable Infectious Diseases—Home and Hospital Deaths, 1956

Diseases	Deaths			Hospital Deaths per cent. of Total Deaths	Corresponding percentage for the year 1955
	At Home	At Hospital	Total		
Diphtheria	—	—	—	—	—
Enteric Fever	—	—	—	—	—
Pulmonary Tuberculosis	5	8	13	61.54	35.56
Tuberculosis (other forms)	—	3	3	100.00	100.00
Pneumonia (all forms)	38	29	67	46.77	55.38
Puerperal Fever	—	—	—	—	—
Chicken Pox	—	1	1	100.00	—
Cerebro-spinal Fever	—	—	—	—	—
Acute Poliomyelitis	—	—	—	—	—
Encephalitis Lethargica	—	—	—	—	—
Malaria	1	—	1	100.00	—
Total	44	41	85	48.23	57.14

Premises, &c., Disinfected for Infectious Diseases and Vermin—1956

Diseases	Premises sprayed
Pneumonia	34
Tuberculosis	79
Enteric Fever	9
Diphtheria	17
Puerperal Fever	—
Ophthalmia Neonatorum	7
Chicken Pox	81
Poliomyelitis	—
Cerebro-spinal Fever	—
Leprosy	—
Total	227
Vermin	183

11,500 Cesspits were sprayed with a mixture of crude and distillate oils (free of charge) as a routine measure of prevention against spread of the bowel-filth diseases.

TUBERCULOSIS

Pulmonary Tuberculosis

It is becoming increasingly clear with each succeeding year that the measures which have been applied during the past twelve years to the elimination of this disease both on the curative and preventive side are beginning to bear fruit and it is possible now to look forward to the day when pulmonary tuberculosis will be looked upon as a rare disease in the Urban Sanitary District.

What a long way we have travelled from the days when the notifications of pulmonary tuberculosis that were received at the Public Health Department did not exceed by more than 16 per cent. the deaths certified to this disease, such as was the case in the twenty year period 1919-38, to the five year period 1952-56 when the deaths certified were no more than 16 per cent. of notifications received.

It indicates clearly that more and more cases are being brought under treatment at that early stage at which a clinical cure can be confidently expected, that more cases are actually being cured and discharged from hospital or sanatorium and that more and more cases are returning to normal life.

More important yet, the old sense of fear and hopelessness, the feeling of intolerable calamity, the despair and disappointment in home or family are more and more giving way to hope and confidence in ultimate recovery when once the initial shock has been overcome.

To this extent have the consistent efforts of the Tuberculosis Division of Government, the preventive work of the Public Health Departments of the Municipalities and Government, and the propaganda and the welfare work of the Association for the Prevention of Tuberculosis been blessed with the success that they deserve.

But bright as the picture is on the curative side, the hope that is thereby engendered is not correspondingly sustained on either the preventive or the rehabilitation side.

There are several urgent problems awaiting solution and it would appear that there is little disposition to grapple with them.

The patient when cured and discharged from hospital or sanatorium has normally to return, whether he likes it or not, to the same hovel in the same insanitary surroundings where he fell a victim to the disease and where conditions are ripe and ready for a relapse.

Slum Clearance the *sine qua non* in the fight against tuberculosis has come to a practical standstill through lack of funds. Dwelling houses have now reached the point of extreme dilapidation and disrepair with sanitary conveniences oftener than not correspondingly neglected and where dirty, damp and wet surroundings are the usual concomitants of these insanitary conditions.

Food, the sheet anchor of all measures directed to the prevention and treatment of this disease and particularly the basic essential foodstuffs, in addition to being in short supply on occasions, is so expensive as to make it extremely difficult for persons of the poorer classes, among whom the incidence of pulmonary tuberculosis is highest, to purchase an adequate amount.

Of greater significance is the fact that the sufferer from tuberculosis when cured and discharged to normal life again is sorely pressed when it comes to finding suitable employment or any employment at all.

The stigma of working beside and even of being on the same premises as a person who has had tuberculosis remains as great as it ever was and in the circumstances employers show great reluctance to give employment to such people. Oftener than not the cured patient cannot undertake the same kind of employment in which he was previously engaged and he has to be trained in those forms of employment suitable to his condition.

This work of rehabilitation is undertaken by the Association for the Prevention of Tuberculosis but only to a limited extent and at the moment only a few ex-patients can be trained for new jobs and these are few and far between.

Expansion of this work is an urgent necessity but more and more funds are required to carry out this work to the fullest possible extent. Perhaps, however, of even greater importance than funds is the need for voluntary workers and for teachers and demonstrators of handicraft and other forms of employment that are within the capacity of the patient, to join the small band whose time is already fully taken up in forwarding the objects of this most worthy cause.

CHART F

Port-of-Spain

Pulmonary Tuberculosis — Notifications and Deaths 1918-1956

Pulmonary Tuberculosis—Notifications and Deaths—1918-56

Period	Notifications	Deaths	Death Rate per 100,000 population
Year 1918	299	233	343
Yearly Averages:			
1919–23	207	173.2	265
1924–28	167.6	154.6	238
1929–33	133.6	12.9	185
1934–38	147.4	124.6	162
Average 1919–38	163.9	145.4	213
Year 1939	175	167	185
1940	155	118	128
1941	113	124	127
1942	157	136	137
1943	182	148	145
1944	186	158	152
1945	206	140	141
1946	173	158	157
1947	222	167	174
1948	170	108	109
1949	189	58	57
1950	127	55	53
1951	143	27	25
1952	147	28	26
1953	122	20	18
1954	137	22	19
1955	120	14	12
1956	85	13	11

Non-Pulmonary Tuberculosis

This is a form of Tuberculosis which deserves more attention than is usually given it for the simple reason that it is the form of tuberculosis that is more amenable to preventive measures than any other form. It, however, suffers from the handicap that it is a form of tuberculosis that is more often diagnosed in the post-mortem room than in the clinic because of the somewhat obscure nature of the disease and the similarity of its clinical manifestations to other well known clinical conditions. In fact tuberculosis of the bowels, the bones and the meninges are usually caused by the bovine type of the tubercle bacillus which is conveyed by the food of man, especially the milk and meat of bovines.

Regular ante-mortem examination of animals about to be slaughtered, efficient post-mortem inspection and the proper pasteurisation of milk, the standard for which should be laid down by appropriate legislation, before meat and milk are offered for sale to the general public would go a long way towards eliminating the basic cause of this disease.

It is a matter of some importance to bear in mind the fact that the percentage of positive reaction to the tuberculin test for tuberculosis would appear to be rising and it is stated that nowadays even goats are beginning to react positively, a fact which underlines the need for more careful examination and a wider application of the tuberculin test to all cattle before they are added to herds which supply milk for human consumption.

Non-Pulmonary Tuberculosis—Forms, notifications and Deaths, 1956

Forms	Notifications	Deaths
Miliary Tuberculosis	2	2
Tuberculosis of Meninges	1	1
Do. Spine and Bones	—	—
Do. Peritoneum	—	—
Do. Larynx	—	—
TOTAL	3	3

Deaths from Non-Pulmonary Tuberculosis, 1924-1956

Period	Deaths	Rate per 100,000 population
Yearly Averages :		
1924–28	15	23
1929–33	15.2	22
1934–38	10	13
Average 1924–38	13.4	19
Year 1939	15	17
1940	14	15
1941	6	6
1942	4	4
1943	9	9
1944	10	10
1945	13	12
1946	14	14
1947	11	11
1948	6	6
1949	10	10
1950	14	13
1951	7	7
1952	12	11
1953	6	5
1954	4	3
1955	3	3
1956	3	2

ENTERIC FEVER

One of the first questions asked by the intelligent visitor to a City that he has never been to before, particularly if that city is situated in a tropical or sub-tropical zone, concerns the incidence of and mortality from typhoid or enteric fever and this because, quite apart from the serious nature of the disease itself and the possibility of its leading to the death or serious disability of the individual, the prevalence of typhoid fever in any community is a very sensitive index of the state of health and sanitation prevailing, of the purity of the water supply, of the relative cleanliness of the foodstuffs, in fact of the general level of education and particularly health education obtaining in that community. For it is an accepted fact that where the general state of sanitation is low and particularly where the disposal of sewage is so inefficient that contaminated faecal matter can find its way, either through the consumption of contaminated foodstuffs or by drinking infected water, into the alimentary tract of the individual, there will invariably be found a high incidence of typhoid fever and a correspondingly high death rate from that disease.

The aim of all modern methods of sanitation and of the water borne system of sewage disposal particularly, is to lower the incidence of the bowel filth diseases of which typhoid fever is perhaps the most important, and eventually to eliminate them altogether.

The water borne sewerage system insures the speedy removal of faecal matter and particularly infected faecal matter from inhabited premises, and their ultimate disposal in a place where they can exert no harmful effect. It is obvious, therefore, that a system of conservancy which permits faecal matter to be retained in and about premises carries with it a grave potential risk and that same faecal matter, if by any chance it happens to be infected, may cause the spread of typhoid fever, dysentery and other bowel filth diseases.

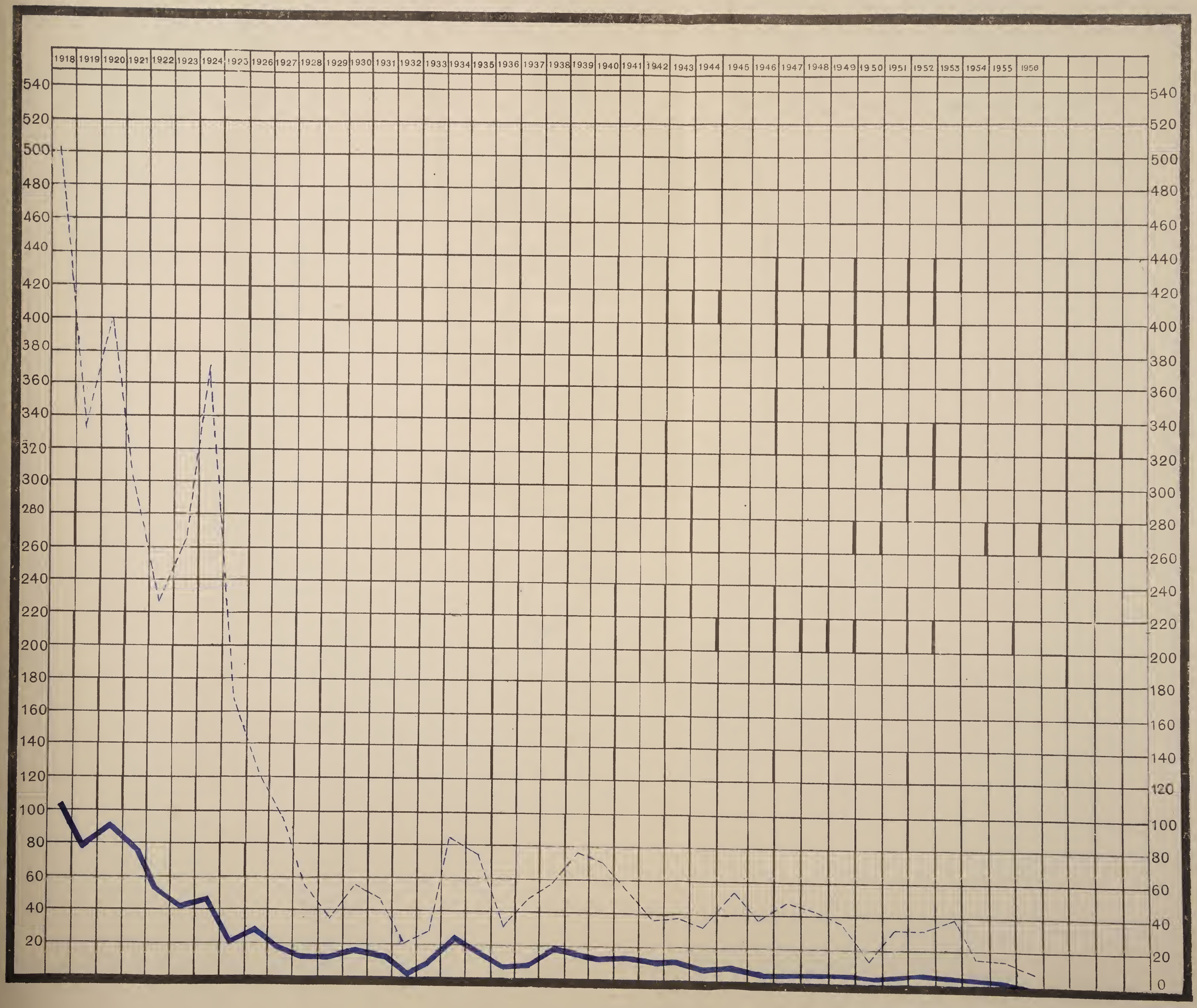
In the City of Port-of-Spain where less than one half of the Urban Sanitary District is sewered, there still remains the privy cesspit system of disposal of faecal matter with a certain number of premises being served by local sewage disposal systems, septic tanks or what is much more usual cesspools.

It is clear, therefore, that in these unsewered areas the risk of the spread of typhoid fever is a real one, a risk that is ever present but very considerably diminished by the constant oiling and disinfecting of these areas which is part of the regular routine work of the Public Health Department but which is intensified whenever a case of typhoid fever occurs in the district.

In these latter circumstances the oiling of all the privy cesspits within a circle a mile wide is immediately undertaken in addition to measures of disinfection applied to the premises themselves where the case occurred and to the particular pit where it is almost certain that infected matter has been deposited.

As to how the causative organism is transmitted in those cases of typhoid fever that do occur, it is true to state that they are almost certainly not water borne, but are due in the large majority of cases to the consumption of infected foodstuffs particularly that kind of foodstuff which is usually eaten raw like water cress, cabbage, lettuce, spinach and tomatoes, the vegetable gardens from which they are derived being often than not manured with human excrement which may, for all we know, be contaminated. In other cases it is possible that contaminated shell fish like oysters, shrimps, lobsters, prawns, can play a part; in fact they are known to have been the cause of typhoid fever when they have been gathered from breeding grounds which are contaminated with faecal matter.

CHART G
Port-of-Spain
Enteric Fever – Notifications and Deaths 1918-1956



A proportion of cases is due to contact with an actual case that has either been missed, not diagnosed early enough, or not effectively isolated; other cases again are caused by carriers of the disease, viz. those who have had the disease, and have recovered from its effects but who in spite of all forms of modern treatment still continue to discharge bacilli in their urine or faeces and so remain a potential source of danger.

The number of cases of typhoid fever notified to the Public Health Department during the year under report was 9 as compared with 13 in the previous year 1955, and no deaths certified to this disease were registered compared with one in the previous year.

The incidence of and mortality from this disease has shown a welcome decline since the year 1924 when chlorination of all sources of water supply was instituted and the figure of 9 cases and no deaths is the lowest number recorded in the annals of the history of the Local Sanitary Authority.

If this disease is to be eliminated altogether from the Urban Sanitary District, the whole of the City must be sewered and the preparation and sale of foodstuffs by clean, healthy and intelligent people under improved hygienic conditions and the efficient protection of such foodstuffs from contamination by covering or wrapping the foodstuff, and a properly directed health education campaign to raise the standard of hygiene in the food trade, are the measures that must immediately be undertaken.

ENTERIC FEVER

Notifications and Deaths, 1918-1956

Period	Notifications	Deaths	Death Rate per 100,000 population
Year 1918	495	104	152
Yearly Averages:			
1919–23	301.8	67.8	103
1924–28	162.28	25.2	39
1929–33	37	10.8	16
1934–38	59.8	14.6	19
Average 1919–38	140.3	29.6	44
Year 1939	75	15	17
1940	70	11	12
1941	56	14	14
1942	37	12	12
1943	38	12	12
1944	32	9	9
1945	55	10	9
1946	37	8	8
1947	68	7	7
1948	42	5	5
1949	36	5	5
1950	14	3	3
1951	32	5	5
1952	32	8	7
1953	36	3	3
1954	15	3	3
1955	13	1	1
1956	9	—	—

Inoculation of Enteric Fever Contacts, 1956

T.A.B. Injections

Year	Number Receiving one Injection	Number Receiving two Injections	Total
1947	250	222	472
1948	85	61	146
1949	101	44	145
1950	64	32	96
1951	329	249	578
1952	66	26	92
1953	213	146	359*
1954	101	46	147
1955	50	21	71
1956	43	10	53

*Mass inoculations were carried out during the 1953 outbreak of Enteric Fever at Arima and 8,250 City inhabitants, in addition, were inoculated.

PNEUMONIA

Medical Officers of Health are often asked the question: Why is pneumonia in its many and varied forms still a notifiable disease? Practitioners do not understand the reason why a disease which in the majority of cases nowadays is so amenable to the new drugs and antibiotics like the sulpha drugs, penicillin, aureomycin, streptomycin, &c. and which is usually kept at home under the care of the practitioner who has notified the case, and for which very little in the way of preventive treatment is available, has to be notified to the public health officers who take perhaps a casual and passing notice of the case.

The answer is that in the days when pneumonia was proclaimed a notifiable disease, it constituted a real menace to the health of the residents of the Urban Sanitary District, and because of the congestion and overcrowding of the East Dry River, Belmont and St. James Districts where the majority of the cases occurred, the spread of the disease from person to person by direct contact was not an uncommon feature. Besides it was then often necessary, and at times is still necessary nowadays, to remove cases from these sub-districts to hospital not only for the sake of the ailing patient himself but also to enable proper isolation to take place and to permit disinfection to be undertaken by the Disinfection Unit of the Department.

In these areas where housing accommodation is so inadequate and where poverty and malnutrition are so prevalent coupled with alcoholism, which has such an adverse effect on the outcome of the disease, pneumonia in its various forms is a serious disease with a high mortality often bringing in its trail such sequelae as consumption, heart disease, anaemia and debility. It is in these circumstances that preventive measures are so important and a stitch in time may be the means whereby many more cases are prevented, and much subsequent suffering and misery avoided.

In the year under report 38 cases of pneumonia (all forms) were notified and 67 deaths registered, which shows clearly that pneumonia is a "badly notified" disease in spite of the fact that many of the deaths certified to pneumonia were cases of other diseases, including the chronic systemic diseases, who developed in their terminal stages pneumonia, which was the actual cause of death.

PNEUMONIA—(All Forms)

Notifications and Deaths, 1922-56

Period	Notifications	Deaths	Death Rate per 100,000 population
Yearly Averages :			
1922–26	111.8	78	123
1927–31	69.8	53.4	79
1932–36	155.4	80.6	110
Average 1922–36	112.3	70.7	104
Year 1937	125	85	110
1938	101	70	83
1939	107	59	65
1940	69	63	68
1941	138	88	90
Average 1937–41	108	73	83
Year 1942	332	152	153
1943	251	149	146
1944	109	97	93
1945	118	79	74
1946	87	61	61
1947	75	64	67
1948	62	51	52
1949	73	74	73
1950	64	54	52
1951	81	80	75
1952	68	72	66
1953	46	52	47
1954	48	58	51
1955	39	65	56
1956	38	67	56

DIPHTHERIA

Diphtheria is now assuming an importance in the scheme of things that medical officers of health were not wont to attribute to it a decade ago. It would appear that more cases are occurring nowadays and that the organism which used usually to be of the mitis type is to all appearances undergoing a change to a more virulent type. Certainly more laryngeal cases are being seen and more tracheotomies are needed nowadays than was the case 10 or 15 years ago.

The position is such that a campaign of active immunisation may have soon to be undertaken in schools and clinics, a course that would hardly have been justified 10 or 15 years ago in view of the small number of cases occurring and the general mildness of the disease.

Parents are getting more and more educated to the seriousness of the disease and nowadays whenever a case of diphtheria is notified it is customary to have no difficulty whatsoever in getting all the contacts to come promptly and willingly to the Department for active immunisation—three doses of APT prophylactic being usually given to children and three doses of TAF to adults. Sometimes resort is had to active immunisation with the triple vaccine that is on the market and which contains diphtheria, tetanus and whooping cough toxoids. This is considered preferable to giving anti-tetanic serum which confers only a passive immunity of short duration, tends to the development of anti-toxic and anaphylactic reactions later on, if serum has to be administered to the actual case, and may serve to mask the development of clinical cases making them more dangerous as carriers of the disease.

Seventeen cases of Diphtheria were notified during the year 1956, and no deaths from the disease were reported.

The largest number of cases ever notified to the Public Health Department was in the year 1939 when 61 cases were notified and the greatest number of deaths certified to the disease was in 1945 when 5 deaths were recorded.

It is a matter of imperative necessity that the possibility of diphtheria be always borne in mind in cases of sore throat, that the throat be always inspected in cases of fever, and if the least suspicion is aroused a swab taken, that cases of diphtheria be notified to medical officers of health at the earliest possible opportunity, that they be effectively isolated preferably of course in hospital, and that treatment be begun with anti-toxic serum immediately after the swab is taken and always before the result of the culture is received from the bacteriological laboratory.

DIPHTHERIA

Notifications and Deaths, 1917-56

Period	Notifications	Deaths	Death Rate per 100,000 population
Yearly Averages :			
1917–21	11.8	1.4	2
1922–26	14.8	2	3
1927–31	23.8	1.6	2
1932–36	29.8	2.2	3
Average 1917–36	20	1.8	3
Year 1937	30	4	5
1938	16	3	4
1939	61	2	2
1940	37	2	2
1941	30	2	2
Average 1937–41	34.8	2.6	3
Year 1942	18	3	3
1943	40	4	4
1944	19	3	3
1945	20	5	5
1946	22	2	2
1947	23	2	2
1948	9	1	1
1949	11	2	2
1950	37	3	3
1951	28	1	1
1952	20	1	1
1953	33	1	1
1954	26	1	1
1955	20	1	1
1956	17	—	—

CHICKEN POX

Chicken Pox is not an infectious disease that gives rise to much worry or concern to public health officers; cases are usually mild and straightforward and there has never been a return received at this Department in which chicken pox has been stated to be the principal cause of death; this, of course, is possible in weak and debilitated children when complications like broncho-pneumonia or encephalitis set in, but ever since the establishment of the Local Authority in January, 1917, which enabled statistics to be carefully collected and properly compiled, chicken pox has never been responsible for a single death.

The real reason why it is important to notify a case of chicken pox is that a mild case of small pox may every now and then simulate closely a case of chicken pox and be diagnosed as such with the dire consequences of a missed case of small pox and all its subsequent effects.

We are fortunate that so far nothing of this sort has ever occurred within the limits of the Urban Sanitary District.

That is why medical officers of health try to see as many cases of chicken pox as possible and would like, if the necessary beds were available, to have all cases of chicken pox removed to hospital for isolation and treatment.

This is especially desirable when the dwelling is overcrowded and two or more cases have already occurred and more are likely to occur.

During the year under report 101 cases of chicken pox were notified to the Department as compared with 113 in the year before. This may be considered a mild epidemic, as it was last year; the largest number of cases ever notified was in the year 1946 when 196 cases were notified.

CHICKEN POX

Notifications, 1924-56

Period	Notifications	Period	Notifications
Yearly Averages :			
1924–28	19.8	Year 1944	33
1929–33	41	1945	122
1934–38	110.4	1946	196
1939–43	42.6	1947	57
		1948	51
		1949	57
		1950	96
		1951	95
		1952	94
		1953	51
		1954	133
		1955	113
		1956	101

OTHER NOTIFIABLE INFECTIOUS DISEASES

No notifications of acute anterior poliomyelitis, of encephalitis lethargica or of acute ascending myelitis (paralytic rabies) were received at the Public Health Department during 1956.

No cases of plague, cholera, typhus fever, yellow fever or small pox, either variola major or variola minor (alastrim) were reported to the Department during the year under report.

ACUTE ANTERIOR POLIOMYELITIS

Notifications and Deaths, 1927-56

Year	No. of cases reported	Deaths	Year	No. of cases reported	Deaths
1927–29	—	—	1943–44	—	—
1930	5	1	1945	—	1
1931	—	2	1946	1	—
1932	3	—	1947	—	1
1933–35	—	—	1948	3	2
1936	3	—	1949	4	—
1937	10	1	1950	—	—
1938	2	—	1951	—	—
1939	1	—	1952	3	—
1940	—	—	1953	—	—
1941	15	4	1954	35	—
1942	26	3	1955	2	—
			1956	—	—

NON-NOTIFIABLE INFECTIOUS DISEASES

There is no hard and fast line that demarcates a non-notifiable infectious disease from a notifiable infectious disease and there is no definite scientific reason why some diseases are classified as notifiable infectious diseases and others as non-notifiable infectious diseases. In fact some of the diseases listed under the heading "non-notifiable" may be much more infectious and do much more harm than some of those classified as notifiable, and in times of unusual prevalence may even be proclaimed "notifiable" in order to give public health authorities an opportunity of determining where and in what numbers they are occurring so that preventive measures directed to limiting their spread as well as to preventing altogether their occurrence may be applied at the earliest possible opportunity.

Such has sometimes been the case with measles, whooping cough and influenza; in fact even when these diseases are non-notifiable Sanitary Inspectors have been directed to take note of any cases of measles or whooping cough that they may encounter in the course of their house to house inspections in their districts and to notify the Medical Officer of Health.

Some of these diseases can on occasion present major public health problems and tax the energy and resources of public health authorities. Several pandemic waves of influenza have been known to sweep the world leaving many deaths and much disability in their trail.

Again the more chronic of the diseases listed under this heading are the cause of the major public health problems which affect the civilised world at the present time, to eliminate which extensive public health schemes have been prepared by various health organisations under the aegis of the World Health Organisation and are now in the process of being actively executed in many of the countries of the world. As a matter of fact the Venereal Diseases Division and the Leprosy Division of Government are actively engaged in an island wide scheme directed to the elimination of yaws, venereal disease and leprosy, and the Malaria Division of Government is at the moment actively engaged in the eradication of malaria and the elimination of the mosquito *aedes aegypti* in keeping with our international obligations to the Pan American Sanitary Bureau, which is the regional representative of the World Health Organisation in the southern hemisphere.

Playing such an important part as they do in the health, welfare and economy of the community it seems a mistake to rely on the death returns only in order to form some idea of the prevalence of these diseases, returns which often give only an imperfect idea of their existence seeing that many deaths attributable to them masquerade under other terms like aneurysm, coronary thrombosis, cerebral thrombosis, hemiplegia, which are often due to syphilis; liver abscess which is often a complication of dysentery; anaemia, the invariable result of hookworm disease, and liver disease caused by malaria, the complications of the disease being listed as the immediate cause of death.

Notifications would go a long way to solve the difficulty but one must admit that there are other problems of a social or domestic nature associated with these diseases which may very well be aggravated by notification; these problems are, however, not insurmountable and these diseases should quite definitely for the reasons stated be included in the list of notifiable infectious diseases. As a matter of fact malaria has been so declared under section 103 of the Public Health Ordinance, Ch. 12. No. 4, and is now a notifiable infectious disease, with all the statutory requirements embodied in that declaration.

During the year under report 22 deaths due to non-notifiable infectious diseases were certified in the returns that reached the Public Health Department of which syphilis claimed by far the greater number, 18.

Non-Notifiable Infectious Diseases—Home and Hospitals Deaths (1956)

Diseases	Deaths			Hospital Deaths per cent. of Total Deaths	Corresponding percentage for the year 1955
	At Home	At Hospital	Total		
Whooping Cough	—	—	—	—	—
Influenza	1	—	1	—	—
Dysentery	—	3	3	100.00	—
Ankylostomiasis	—	—	—	—	—
Syphilis	10	8	18	44.44	25.00
Leprosy	—	—	—	—	—
Total	11	11	22	50.00	—

MALARIA

The position in regard to malaria in the year under report remained substantially the same as it was in the year 1955 and which has been recorded in some detail in my report for the year 1955. To repeat, there is very little malaria within the limits of the City and what there is is due to importation from outside, i.e. by cases who have acquired malaria outside the City and who come into or are brought into the City for treatment and by old febricitants who once lived in a malarious area but who have now taken up residence within the City's limit and who get periodic recrudescences of an infection, due to the lowering of resistance, which was never really eradicated.

That does not, of course, mean to say that no anophelene mosquitoes are to be found within the City's limits; in the wet season particularly it is possible to pick up mosquito larvae of the anophelene species in the swampy areas at the extreme eastern and western limits of the City but they have never created much of a problem and they have always been brought under control by the time honoured method of canalising, oiling, draining, &c., &c.

However, with the eradication of malaria from these areas that adjoin the City, thanks to the splendid efforts of the Malaria Division of Government, it is becoming increasingly difficult to find

mosquito larvae in these areas and correspondingly the importation of malaria into the City is destined to become an increasingly rare event.

There can, however, be no let up in this work of anophelene control especially when it is remembered that no permanent major works of any kind have as yet been started in the Cocorite Area to get rid once and for all of the malaria problem in the swamp, and whilst the Malaria Division of the Health Department of Government continue their splendid work of control in that area for which the City owes them a great debt of gratitude the expenditure of 10 to 12,000 dollars a year for measures which are essentially of a temporary and palliative nature only is too high a price to pay.

Reclamation of the Cocorite Swamp is long overdue, a project that would result eventually in the reclamation and laying out of at least 600 building lots and in the development of a residential area for the residents of the poor and badly sanitated areas of the City.

I would be failing in my duty were I not to put on record the gratitude of the Local Sanitary Authority to the Malaria Division of the Health Department of Government for the close co-operation and ready assistance given in all the various mosquito problems that affect the City.

As has been reported before, this Colony is being surely and rapidly freed of malaria as a result of the intensive campaign now being executed by the Malaria Division of the Health Department of Government and both rural and urban practitioners continue to make reference to the lowered and the lowering incidence of malaria.

Malaria is destined to become a rarity and will eventually be eradicated in keeping with our international obligations.

The benefit to industry in the saving of a countless number of man hours previously lost, to agriculture in the opening up to commercial intercourse and to cultivation of areas once heavily infested with malaria, to animal husbandry in the increased incentive thereby given to the rearing of cattle, pigs and sheep can more easily be imagined than expressed.

During the year under report there were 2 cases of malaria notified and one death certified.

Malaria—Local Distribution of Deaths, 1947-1956

Sub-districts	Deaths									
	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
City Proper ...	—	—	1	—	—	—	—	—	—	—
St. Clair	—	—	—	—	—	—	—	—	—	—
East Dry River ...	—	1	—	—	—	—	—	—	—	—
Belmont	2	1	—	—	—	—	—	—	—	—
Woodbrook ...	1	—	—	—	—	—	—	—	—	1
St. James ...	2	1	—	—	1	—	—	1	—	—
Total ...	5	3	1	—	1	—	—	1	—	1

SYPHILIS

The importance of syphilis as a public health problem of the first order cannot be overestimated since the disease makes widespread and damaging incursions on all the tissues of the human body particularly the delicate tissues of the heart and blood vessels, and of the nervous system where damage when once done can hardly ever be recovered from.

It is therefore a matter for great satisfaction that it is possible to record that the Venereal Diseases Division of the Health Department of Government which was established in 1943 with the help and advice and under the direction of Colonel O. C. Wenger of the United States Army and supported then by funds provided by the Development and Welfare Organisation but now solely by funds provided by Government continues to function with efficiency and with results that cannot be considered anything but satisfactory during the year under report.

This Division which now occupies the old U.S.O. Building on Wrightson Road and forms part of the Caribbean Medical Centre remains a great boon to the residents of the City considering the results that have been achieved in the way of the detection and treatment of venereal disease, in the awakening of the public conscience to the damages and ravages of these diseases, in the re-education and sometimes even the rehabilitation of the known members of the prostitute class who are largely responsible for the ready spread of the disease.

The Local Sanitary Authority once more desires to place on record its gratitude for the solid achievement of the Division and the great benefit to the public health of the City that it has proved itself to be.

The result of the activities of this Division and particularly of the propaganda that is being actively undertaken to educate the City's population to the ravages of venereal disease has been so successful that it is difficult nowadays to encounter a case of primary syphilis and fewer and fewer food handlers are found to be suffering from venereal disease with each succeeding year.

There is today a greater consciousness on the part of the citizens of the Urban Sanitary District of the menace that syphilis presents to the health of the community in view of the widespread damage to the physical system that it can cause, of the deleterious influence it can exert on mothers and children, of the important part that it plays in the infant mortality, particularly that part of it which occurs during the first month of extra-uterine life, viz., the neo-natal mortality, of the moral degradation that leads up to the disease and of the domestic unhappiness and disruption that it can give rise to.

The tissues of the central nervous system, of the heart and blood vessels, of the liver and kidneys are nowadays the chief seat of the clinical manifestations of syphilis and this is undoubtedly due to the fact that the inadequate and inactive treatment of the primary lesion which obtained in former days is now beginning to manifest itself in the form of this attack on these very delicate and vulnerable tissues.

Adequate treatment of the underlying disease is the one and only means whereby these serious after-effects can be prevented.

The problem, however, that still awaits complete solution is how to round up and bring in for treatment those few recalcitrant cases that are careless to the harm that they are capable of doing to themselves and others and who display great perversity in the persistent efforts they make to spread the disease in spite of the knowledge that they are in a highly infectious state.

Persuasion seems to have very little effect on these people and often one feels that the only effective method is compulsion by law.

During the year under report 18 deaths certified to syphilis were recorded in the returns that reached the Public Health Department.

Deaths from Syphilis 1918-56

Period	Deaths	Rate per 100,000 population
Yearly Averages :		
1918–22	16.2	24
1923–27	56.8	88
1928–32	28.2	41
1933–37	21.8	29
Average 1918–37	24.6	37
Yearly Average 1938–42	24.6	27
1943	29	28
1944	36	35
1945	22	21
1946	20	20
1947	21	22
1948	8	8
1949	7	7
1950	8	8
1951	11	10
1952	6	5
1953	7	6
1954	8	7
1955	13	10
1956	18	15

DYSENTERY, DIARRHOEA AND ENTERITIS

These infectious diseases are usually considered together and the only reason perhaps why this is usually done is due to the fact that their method of spread follows a common pattern, i.e. the intestinal infection of man by swallowing excreta contaminated with the causative organisms. Though these organisms vary, being bacilli of the food poisoning type, i.e. salmonella sometimes, true dysentery bacilli at other times, and protozoa on occasions, in order to start the infection these bacilli must find their way via the mouth to the intestinal tract of man and this is generally done through the medium of contaminated foodstuffs, particularly those of the "greens" variety that are usually eaten raw or partially cooked, and those of the made-up variety that are subjected to much handling like ice cream, mayonnaise, pies, sausages, pastry, &c. It does happen also on occasions that tinned foodstuffs are the vehicle whereby these infections are introduced into the body, particularly tinned foodstuffs that are in the early stage of blowing due to improper and inadequate processing.

Transmission from case to case by fingers and fomites is, of course, a possibility if those who are attending or nursing a case of these diseases are not careful about disinfecting and washing

their fingers thoroughly before partaking of food or are victims of that disgusting habit of licking or sucking the fingers, but this method is rare and exceptional.

Improper certification of the cause of death may cause returns to be labelled dysentery or diarrhoea when the basic underlying cause is cancer of the bowels or intestinal tuberculosis, but these errors are not usually met with nowadays with the greater care that is being exhibited in the certification of causes of death and particularly with the adoption of the International Classification of 150 causes of morbidity and mortality.

The diarrhoea and enteritis of infants appears to be a disease *sui generis* caused by organisms of either the food poisoning or dysentery variety.

It appears certain that the vehicle of transmission is contaminated milk or liquid foods in which fresh milk or dried milk forms the essential part. Exposure of this type of food to the dirt, dust or germs of the atmosphere in an open kitchen or pantry where the temperature is suitable for the rapid multiplication of organisms almost invariably leads to contamination. It is important to bear in mind that milk foods are very susceptible to contamination and should be consumed almost as soon as they are prepared and the greatest care taken of bottles, spoons, saucers, cups, &c., and last but not least to the hands of those in attendance upon infants and young children.

In this connection proper and efficient pasteurisation of milk in keeping with statutory requirements for which public health officers have been clamouring for years now would go a long way in reducing the incidence of this infection.

During the year under report 3 deaths certified to dysentery and 57 deaths certified to diarrhoea and enteritis were recorded in the returns that reached the Public Health Department.

Deaths from the Dysenteries—1918-56

Period	Deaths	Death Rates per 100,000 population
Year 1918	43	63
Yearly Averages :		
1919–23	38.2	58
1924–28	32	49
1929–33	14.8	21
1934–38	5.4	7
1939–43	7.4	8
1944–48	3	3
Average 1919–48	16.8	23
Year 1949	1	1
1950	2	2
1951	1	1
1952	3	3
1953	3	3
1954	2	2
1955	—	—
1956	3	2

Deaths from Diarrhoea and Enteritis—1918-56

Period	Deaths	Death Rates per 100,000 population
Year 1918	193	284
Yearly Averages :		
1919–23	143.6	218
1924–28	72.8	112
1929–33	52.8	76
1934–38	40	52
1939–43	78.4	81
1944–48	46	44
Average 1918–48	76.16	103
Year 1949	30	30
1950	37	35
1951	42	39
1952	39	36
1953	58	51
1954	37	32
1955	45	38
1956	57	47

Diarrhoea and Enteritis—Deaths in Sub Districts, 1956

Sub-districts	Deaths
City Proper	8
St. Clair	1
East Dry River	18
Belmont	15
Woodbrook	1
St. James	14
TOTAL	57

OTHER PRINCIPAL CAUSES OF DEATH

Cardiac and Vascular Diseases

Cardiac and vascular diseases are continuing to exact a very heavy toll of mortality from the citizens of the Urban Sanitary District and every year the same picture emerges, viz. that more and more people in the middle and old age-periods are falling victims to these diseases in one form or other. Why this should be so it is not by any means clear, in fact so obscure generally are the underlying factors that determine the incidence of this onslaught on the heart and blood vessels that in the present state of our knowledge it is not possible to apply preventive measures with any degree of certainty that they will be productive of successful results.

And the position is the same in all civilized countries of the world; compilers of vital statistics in every part of the world continue to record the fact that cardiac and vascular diseases are claiming more and more victims with each succeeding year and this is particularly the case in the big and busy cities where the stresses and strains and the pace of modern life are at their greatest.

Uncertain as is our knowledge of the causes of these diseases there are, however, a few facts that are definite and on which preventive measures can be based, viz., the toll of mortality is highest at the older age-periods, 41 to 60, and over 60 when the delicate tissues of the heart and blood vessels are beginning to show signs of wear and tear and to feel the stress and strain incidental to the complexities of modern life. Again a certain definite percentage of these cases is due to organic disease that is susceptible to the influence of preventive measures. I refer to those diseases of the heart and blood vessels that are due to chronic infections like syphilis and toxins associated with chronic diseases of the liver and kidneys.

Adequate and efficient treatment of syphilis in the early stages and above all the prevention of the infection altogether would spare those delicate tissues of the heart and blood vessels and of the brain, nervous system and sensory organs that are so vulnerable to this disease and for which so little in the way of treatment can be done when once they have been attacked.

The avoidance of those well known poisons like alcohol and other drugs, &c. that cause and aggravate kidney and liver disease would certainly put off the day when the heart must feel the inevitable strain and suffer a breakdown.

It would appear that in the present state of our knowledge that is the most that can be done to stem the tide of mortality attributable to these diseases; much however, can be achieved by a campaign of health education directed to the detection of these diseases in their early stages when much more can be done to limit their evil effects and to diminish the harm done, to teaching the afflicted how to live within the limits of his damaged heart and blood vessels, how to avoid the stresses and strains, the worry and anxiey of modern life and yet be able to undertake useful and productive work; and this is particularly necessary seeing that the greatest incidence of these diseases is as I have already indicated, to be found at the later age-periods of life when by reason of his knowledge, wisdom and experience the victim is likely to be of the greatest value to the community.

During the year under report 287 deaths from cardiac and vascular diseases were listed in the returns that reached the Department from the General Hospital and from other institutions and nursing homes and from the various district registrars in the different parts of the City. It is to be noted, in regard to this mortality, that only 16 were of persons under 40 years of age.

Diseases of the Circulatory System in Age Groups—1956

Forms	0–20 years	21–40 years	41–60 years	Over 60 years	Total
Rheumatic fever	2	—	1	1	4
Chronic rheumatic heart disease	1	—	—	2	3
Arteriosclerotic and degenerative heart disease ...	—	4	30	149	183
Other diseases of the heart	2	2	4	12	20
Hypertension with heart disease	—	2	13	33	48
Hypertension without mention of heart	—	1	5	14	20
Diseases of arteries	1	—	2	4	7
Other diseases of circulatory system	—	1	—	1	2
Total	6	10	55	216	287

CANCER AND OTHER MALIGNANT DISEASES

Here again the facts at our disposal are so few that the most that can be done is to record them and draw whatever conclusions can reasonably be drawn from a consideration of their importance.

More deaths due to cancer and other malignant diseases have been recorded during the last decade of the present century than has been the case in the previous three decades and although the rise cannot be considered a steep one it would appear that the rise is significant from a statistical point of view.

Greater diagnostic accuracy and the increasing expectation of life may be responsible for the larger number of deaths that are occurring but undoubtedly there are other causes at work of which we are absolutely ignorant at the moment.

Research continues but so far with little success.

The only hope at the moment would appear to be health education again, a campaign designed to secure a greater appreciation of the severity of these diseases, of their high mortality which amounts practically to one hundred per cent. and of the fact that early diagnosis and treatment are the only means whereby these diseases can be kept under control. Any suspicious lump or indolent ulcer in any part of the body should at once be brought to the notice of a doctor with a view to early diagnosis and if necessary appropriate treatment either by surgery, X-ray or radium.

Analysis of the tabulated statement listed hereunder shows that in males the organ most affected is the stomach and in females the uterus and the breast, and that twice as many deaths occurred in women as in men.

Cancer and other Malignant Diseases—1956

Malignant Neoplasms	Deaths	
	Males	Females
Malignant neoplasm of buccal cavity and pharynx	2	1
Malignant neoplasm of oesophagus	2	—
Malignant neoplasm of stomach	8	6
Malignant neoplasm of intestine, except rectum	2	8
Malignant neoplasm of rectum	3	1
Malignant neoplasm of larynx	3	—
Malignant neoplasm of trachea and of bronchus and lung not specified as secondary	3	1
Malignant neoplasm of breast	—	14
Malignant neoplasm of corvix utori	—	12
Malignant neoplasm of other and unspecified parts of uterus	—	11
Malignant neoplasm of prostate	4	—
Malignant neoplasm of skin	2	1
Malignant neoplasm of bone and connectivo tissue	1	1
Malignant neoplasm of all othor and unspecified sites	4	9
Leukaemia and aloukaemia	1	1
Lymphosarcoma and other nooplasms of lymphatic and haematopoietic system	2	1
Total	37	67

Deaths from Cancer and other Malignant Diseases—1918-56

Period	Deaths	Rate per 100,000 population
Yearly Averages :		
1918–22	44.4	67
1923–27	45.6	71
1928–32	44.6	65
1933–37	556.8	76
Average 1918–37	47.9	70
Yearly Average 1938–42	75.4	82
1943	88	86
1944	84	81
1945	80	75
1946	79	78
1947	75	78
1948	87	88
1949	91	90
1950	91	89
1951	103	94
1952	89	90
1953	113	102
1954	96	84
1955	104	89
1956	104	87

SANITARY ADMINISTRATION

During the year under report the fixed establishment of the Public Health Department comprised 206 employees, of whom 52 were members of the permanent pensionable staff and 154 were members of the permanent non-pensionable staff.

But at the end of the year only 35 of the permanent pensionable staff were permanent employees; 12 employees were acting in permanent posts, and there were five vacancies which could not be filled by even acting employees there being at that time no properly qualified applicants to fill these vacant posts.

This state of affairs was due in the first place to the fact that the Local Services Commission though duly appointed had not yet begun to function and no permanent appointments could legally be made, in the second place to a shortage of sanitary inspectors and health visitors from which the Colony as a whole is suffering, and in the third place to the better conditions of service and the more generous amenities provided by the Central Government who are, therefore, able readily to attract all recently qualified sanitary inspectors and health visitors.

At the time I write all employees who had been acting in permanent posts, some of them for over two years, have been made permanent and there are on the permanent staff only four acting men; the three posts of health visitor and one post of sanitary inspector remain vacant due again to inability to get suitably qualified staff to fill them.

The Sanitary Inspectors who numbered 20 from the year 1920 to the year 1951 when 11 more were added to the staff still number 31 and of these 26 are permanent men, four are filled by acting men and one post still remains unfilled.

The City was again divided into 18 sanitary districts with a sanitary inspector in complete charge of all the sanitary services in his district. In fact the District Sanitary Inspector is in a sense the Medical Officer of Health of his district and is answerable to the Chief Sanitary Inspector and ultimately to the Head of the Department for the health and sanitary state of his district.

He does the house-to-house inspection of his district, and in addition is in charge of the special services, anti-rat, anti-mosquito, anti-rabies and disinfection when sections of these units are operating in his district and the Sanitary Inspector in charge of the Unit is away elsewhere. His duties on these occasions comprise supervision and direction of personnel to ensure efficiency and discipline.

Each Sanitary Inspector is expected to make 25 house-to-house inspections a day and he is enjoined to "cover" his district, i.e. to inspect each and every premises in his district, at least once in five weeks.

Eight other sanitary inspectors were employed in the year under report in the execution of duties of a special nature: one is the Buildings Inspector, also in charge of layouts, leases, assignments, &c.; one Inspector is in charge and control of the Anti-Rat and Anti-Bat Units; one Inspector is in charge and control of the Anti-Mosquito Unit; three Inspectors are assigned to food inspection work and see to the examination and registration of food handlers and food places throughout the City; one Inspector is the Health Education Officer in charge of health education activities; the

Senior Sanitary Inspector (Outdoor) is in charge of water samples, is the Factories Inspector, and patrols the various catchment areas of the river and well sources of water supply in addition to his usual duties of planning, directing and supervising the work of the District Sanitary Inspectors.

The three posts of sub-overseers created in 1954 continued to be filled by acting men in the year 1956, but these men were made permanent incumbents of the posts in April this year.

The two overseers and the three sub-overseers are attached to and supervise and control the non-pensionable staff which comprise the Anti-Mosquito Unit of two checkers, one recorder, two foremen, nine supervisors, 32 aedes inspectors, 10 "trappers and 12 cleaners"; the Anti-Rat Unit of one timekeeper, one checker nine foremen and 27 rat trappers; the Anti-Rabies Unit of one checker and five bat trappers; the Disinfection Unit of two spraymen and two oilers; and the Public Conveniences Unit, transferred from the City Engineer's Department in 1943, of 14 caretakers.

The Unit maintained by the Corporation for the emptying of cesspits, cesspools and septic tanks was transferred as has been stated before, to the Department in 1946 and it comprises 12 cleaners who are jobbers, 2 chauffeurs, 1 checker, 1 carpenter and mason, and 1 cooper, 1 caretaker and deadman attendant at the Mucurapo Pumping Station, all under the direction and control of the Supervisor of the cleaning of cesspits.

All told in the year under report the outdoor staff comprised 26 Sanitary Inspectors, 2 Overseers, 1 Supervisor, 3 Sub-Overseers and 149 miscellaneous workers on the non-pensionable staff, all under the care, direction, control and supervision of the Chief Sanitary Inspector.

The indoor staff, i.e. employees who work for the greater part of the day in the Public Health Department, comprised 1 Senior Sanitary Inspector (indoor), 1 Sanitary Inspector, Grade B, 1 Senior Clerical Assistant, 2 Clerical Assistants, 1 Scientific Assistant, 1 Steno-typist and 2 Typists who are all second class clerks, 1 Messenger and 1 Office Attendant, all under the care, control, direction and supervision of the Deputy Chief Sanitary Inspector (Indoor).

The work of the indoor staff is, I need hardly state, as equally important and just as onerous as the work of the outdoor staff and they are concerned with correspondence of all kinds, messages, complaints, verbal and written reports, the issuing of licences, badges, certificates of registration, &c., the preparation of contacts and other applicants for inoculation, and the keeping of equipment, supplies and records relating to preventive inoculations, the keeping of the various registers, books, minutes, &c. of the Department, the compilation of statistics, the preparation of monthly, quarterly and annual reports, and last but not least the checking and verifying of the paysheets of the non-pensionable staff, preparation of the salary sheets of the pensionable staff, the keeping and bringing up to date of the various vote books, in fact all that appertains to the financial transactions and records of the Department.

Inspection of Premises, &c., by Sanitary Inspectors—1956

Average Monthly No. of Visits to Dwellings, Shops and other Premises ... **7,597**

Inspection of Stores, Shops, &c.

	Average Monthly No. of Visits		*Average Monthly No. of Visits*
Provision and Meat Shops	215	Sweet Drink Carts	18
Provision Stores	50	Dairies and Cowsheds	36
Restaurants and Cookshops	52	Stables	17
Bakehouses	28	Goat Pens	61
Bread Depots	17	Aerated Water Factories	5
Cake and Ice Cream Shops	222	Soap Factories	3
Fry Shops	16	Other Factories	133
Hotels	13	Schools	38
Markets	6	Common Lodging Houses	5
Spirit Shops	49	Barber Shops	21
Ice Cream Carts and Pails	61	Dyeworks	2
Cake Trays and Baskets	70	Laundries	21
Provision Trays and Baskets	84	Garages	34
Bread Carts and Baskets	23	Tanneries	3
Fresh Fish Trays	19	Public Urinals	5
Oyster Vendor's Baskets	2	Boats	8
Plantain Carts	1		

Results of Notices and Verbal Directions—1956

	Constructed, installed or provided	Repaired	Cleansed	Painted	Elimi-nated	Lime-washed	Oiled
Yard pavements	73	188	—	—	—	—	—
Depressions in yards	—	—	—	—	161	—	—
Yards	—	33	4,837	—	—	—	—
Drains, sinks, gullies, washing troughs, &c.	413	920	3,959	—	—	—	—
Lavatories, sewer basins, flushtanks, urinals, bath rooms, &c.	364	217	1,213	—	—	—	—
Privies	231	1,051	—	—	—	652	—
Cesspits	177	216	1,797	—	—	—	67
Manure Heaps	—	—	—	—	368	—	—
Rat Holes	—	—	—	—	140	—	—
Tree Shade, Overgrowths of bush ...	—	—	—	—	1,571	—	—
Dustbins	902	74	472	—	—	—	—
Dustbin covers	449	—	—	—	—	—	—
Shops, Parlours, Restaurants, Bakehouses, Hotels, &c.	—	190	2,855	549	—	441	—
Aerated Water Factories	—	—	21	—	—	21	—
Bread Carts	—	—	—	7	—	—	—
Barracks, Common Lodging Houses ...	—	48	70	23	—	71	—
Garages, Kitchens	—	109	—	—	—	118	—
Cowsheds, Stables	—	30	310	—	—	79	—
Tanneries, Soap Factories, &c.	—	—	—	—	—	—	—
Close-boarding, Ventilation of Houses ...	27	—	—	—	—	—	—
Barber Shops and other Workshops ...	—	—	90	14	—	—	—
Schools	—	—	—	—	—	—	—

Reports to Water and Sewerage Department—1956

Reports	*Total*
Leaks, defective taps, chokes, &c.	1,130

Anti-Rabies Measures—1956

TRAPPING, &C., OF BATS

No. of locations inspected for roosts of bats	12,705

BATS CAUGHT

Artibeus Jamaicensis Trinitatis	188
Artibeus Lituratus Palmarum	125
Carollia Perspicillata	27
Glossophaga Soricina	12
Molossus Major	27
Molossus Rufus	15
Chilonycteris Rubiginosa	1
Vampyrum Spectrum	2
Anthorhina Crenulata	1
	398*

*Two (2) Vampyrum Spectrum bats were collected from St. Joseph, Maracas, outside the City limits.

Building Plans, &c.—1956

Reports made by the Public Health Department were as follows :—

On plans, &c., for reconstruction or reconditioning of buildings ...	744
On applications for leases of land in Woodbrook and Gonzales Place ...	111
On premises in which building operations were in progress ...	189
On application for certificates of completion of buildings	85

Cleaning of Privies, &c.—1956

Under the Public Health Ordinance, Ch. 12. No. 4, Section 64 (1) (*c*), Cesspits, Cesspools and Septic Tanks were cleansed as follows:—

East Dry River	674
Belmont	779
St. James	249
Woodbrook	95
	1,797
Out Districts	—

Outstanding cesspits up to 31st December, 1956 numbered 69.

Average cost per cesspit emptied : $22.54.

Prosecutions—1956

CASES DETERMINED BY THE MAGISTRATE

Offences	*No. of Case*	*Results Total Fines, &c.*
Failing to comply with nuisance notices	13	Fined $180.00
	17	Reprimanded
	116	Adjourned
	7	Dismissed
	24	Fresh Summonses
	177	
Breaches of Sale of Foodstuffs Bye-laws	25	Fined $208.50
	48	Reprimanded
	118	Adjourned
	30	Dismissed
	1	Withdrawn
	117	Fresh Summonses
	339	
Breaches of the Yellow Fever Regulations	1	Dismissed
GRAND TOTAL	517	

Cases	*Summary*
38	Fined $388.50
65	Reprimanded
234	Adjourned
38	Dismissed
1	Withdrawn
141	Fresh Summonses
517	

Leave of Absence—1956

	Vacation Leave No. of Days	*Sick Leave No. of Days*	*Local Leave No. of Days*
Aberdeen, K.—Typist	56	7	—
Alfred, E.—Sanitary Inspector	168	—	—
Assing, C. C.—Dept. Chief Sanitary Inspector	28	—	—
Boucaud, R.—Sanitary Inspector	168	5	—
Boxill, E.—Sanitary Inspector	168	—	—
Callender, E.—Sanitary Inspector ...	—	—	9
Carpette, O.—Overseer	—	14	14
Castello, G. —Acting Sub-Overseer ...	14	—	—
Davidson, C.—Sanitary Inspector ...	56	—	—
De Four, H.—Sanitary Inspector ...	—	14	—
De Four, R.—Acting Clerical Assistant ...	14	—	—
Dubois, C.—Sanitary Inspector	49	—	5
Farrell, M.—Acting Sanitary Inspector ...	14	24	—
Forde, G.—Sanitary Inspector	56	—	—
Goodridge, C.—Acting Messenger	14	—	—
Greenidge, St. A.—Acting Sanitary Inspector	—	7	—
Hinkson, G.—Sanitary Inspector	42	—	—
Hodge, L. S.—Sanitary Inspector ...	—	—	10
Hodge, L. L.—Acting Sanitary Inspector ...	14	18	—
Holdip, M.—Sanitary Inspector	—	—	14
Joseph, A.—Messenger	42	—	—
Khan, V.—Sanitary Inspector	70	—	5
Langton, E.—Typist	30	18	—
Marcial, R.—Sanitary Inspector	28	7	—
Mitchell, K.—Acting Sanitary Inspector ...	14	7	—
Mitchell, T. M.—Principal Assistant ...	42	—	5
Nurse, G.—Sanitary Inspector	60	21	—

Leave of Absence—1956—*Continued*

	Vacation Leave No. of Days	*Sick Leave No. of Days*	*Local Leave No. of Days*
Parris, J. E.—Overseer	126	21	—
Perryman, V.—Acting Clerical Assistant ...	14	7	—
Philip, O.—Acting Sanitary Inspector ...	14	14	—
Rauceo, B.—Acting Supervisor	28	—	—
Rivers, F. B.—Sanitary Inspector ...	168	5	5
Romain, A.—Principal Officer	—	—	5
Seon, F.—Sanitary Inspector	—	7	—
Samm, M.—Acting Sub-Overseer ...	14	7	—
Sansavoir, F.—Acting Sub-Overseer ...	14	36	—
St. Cyr, H.—Acting Sanitary Inspector ...	14	—	—
Turney, H.—Sanitary Inspector	30	—	—

			Special Leave
Marcano, Dr. R. G.—Medical Officer of Health	—	—	53

Staff—Resignations, Study Leave, &c.

RESIGNATIONS:

DEPUTY CHIEF SANITARY INSPECTOR (Indoor)

Name	*Date of Resignation*	*Length of Service*
T. M. Mitchell	1st August, 1956	32 years

SANITARY INSPECTOR

E. Alfred	16th August, 1956	8 years

STUDY LEAVE:

Grade A Sanitary Inspector F. Seon pursued a 7-month course in Rodent and Pest Control abroad in the United Kingdom. The classes actually started in September, 1956.

FINANCIAL

Revenue and Expenditure—1954-56

REVENUE	1954	1955	1956
Revenue collected by the Public Health Department	$ 882.58	$ 929.17	$ 1,283.77
EXPENDITURE			
Salaries and allowances	$105,469.66	$115,334.63	$144,164.77
Back Pay for 1954/1955 (Staff) ...	—	—	38,820.56
Wages and allowances	109,402.11	149,134.24	140,219.92
Materials, Maintenance, &c. ...	44,008.74	30,018.29	35,771.47
	$258,880.51	$294,487.16	$358,976.72
Disposal of Night Soil	7,203.20	7,175.41	8,004.13
Emptying of Cesspits	31,982.01	38,542.59	*40,486.35
TOTAL	$298,065.72	$340,205.16	$407,467.20

*Emptying of Cesspits—amount recoverable from house owners $13,832.75.

ACKNOWLEDGMENT

With the increasing population of the City and with the need for more efficient, more extensive, and more varied public health services covering a wider field, it is clear that the work of the Public Health Department continues to increase and to grow in importance with each succeeding year.

Due to a large extent to the greater health consciousness aroused by our health education campaigns the residents of the City are demanding and expecting better general and personal health, a higher standard of sanitation and environmental hygiene and more ready and prompt services efficiently executed.

That we have been able to maintain the public health in a not unsatisfactory state is due to the devotion to duty, and the loyalty of the staff pensionable and non-pensionable, and to the conscientious day-to-day routine work performed under the able direction and leadership of the Chief Sanitary Inspector Mr. O. E. Forde, Cert. R. San. I., and the Deputy Chief Sanitary Inspector (Indoor) as he is now called, Mr. T. M. Mitchell, Cert. R. San. I., for the greater part of the year and Mr. A. Romain who was acting Deputy Chief Sanitary Inspector (Indoor) for the rest of the year, i.e. from the 1st August when Mr. Mitchell went on retirement, to the end of the year 31st December.

I am convinced that all the employees of the Public Health Department are sensible of the great responsibility that is theirs, that they have the welfare and prestige of the Department much at heart and have all spared no effort to render a public service, which can be considered the greatest of all services, that of maintaining the health and sanitation of the Urban Sanitary District, without which all other services would, of course, be a nullity.

For this I am deeply grateful and I seize this opportunity to commend their services to the favourable notice of the Local Authority. Whilst deeply appreciative of their work I am not unmindful of the disabilities they suffer as compared with the Sanitary Inspectors and other workers in the employ of the Central Government, and in the same way that I expect them to spare no effort to keep the work of the Department going, so also I am to request the Local Authority to make haste to provide the wherewithal with which to make the staff of the Department a satisfied and contented staff willing, as always, to continue to give of their best and anxious to stay in the service of the Local Sanitary Authority until the end of their working days.

During the year 1956, to be exact on 31st July, 1956, we lost an outstanding worker of the Corporation in the person of Mr. T. M. Mitchell, Cert. R. San. I. who after 32 years of service resigned the post of Deputy Chief Sanitary Inspector (Indoor) which he held for 16 years. The Local Sanitary Authority suffered a serious loss as a result, for in Mr. T. M. Mitchell we had one of the most capable, conscientious and efficient workers that it has been my pleasure and privilege to be associated with.

A man of great intelligence, he was at the same time an outstanding administrator who inspired respect and admiration and who engendered the confidence of those around him that whilst he was at the helm the ship was certain not to drift into the shoals, or founder on any unseen or obscure rock.

We wish him good health and a long and happy retirement to enjoy the fruit of his labours.

Sanitary Inspector E. Alfred, one of our Senior Sanitary Inspectors left in the early part of the year to go on long leave in Canada. Whilst in Canada he sent in his resignation from the staff of the Department which took place on the 16th August, 1956.

We wish him luck in his new field of endeavour.